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ABSTRACT

These proceedings of a conference on research in the field of adult education contain the texts of 40 conference papers and 4 symposia. Included among the areas examined in the individual reports are the following: education participation scale factor structure and correlates for 12,000 learners, a comparative analysis of adult education research in North America and Britain, a system for selecting models and ordering research, a proposed framework for examining continuing professional education and behavior change, issues in the methodology of participation research, development of a new measure of locus of control orientation in adults, a systems analysis model for optimizing learning environments for adult learners, soft data in adult learning and development research, agendas of research needs as stimulators of research, and writing histories of adult education. The symposia address the following issues: adult education research and development in the United Kingdom and the United States; critical examination of the history of adult education; application of modern testing theories to problems in adult education; and a review of the principles, practices, and philosophy of community adult education. (MN)

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A Model for the Study of Nutrition Attitudes, Knowledge, and Food Purchasing Practices of Parents

Irene Beavers and Margaret Kelly

Governmental response to improving the nutrition of people, both children and adults, was manifested in the passage of Public Law 95-166, commonly known as the National School Lunch Act and Child Nutrition Amendment (1977). Primary among the objectives of this legislation was the development and implementation of nutrition education programs designed to improve the nutritional practices of children and of adults who influence children's nutrition practices.

Considerable evidence supports the belief that parents exert the greatest influence on food attitudes and preferences of children. Yperman and Vermeerch (1979) found that children are better able to retain nutrition knowledge gained at school when it is reinforced by conditions in the home that are favorable to good nutrition. Phillips, Bass, and Yetley (1978) stated that the mother of the preschool child usually has the primary responsibility for introducing the child to new foods and thereby influencing food choices. However, Burt and Hertzler (1978) reported that both mother and father influence the child's food preferences equally.

Past nutrition education programs have tended to stress acquisition of nutrition facts and principles (Yperman and Vermeerch, 1979; Peterson and Kies, 1972). However, recent research suggests that knowledge is not the only influential factor in food choices. Other factors found to influence food choices include attitudes, education level, occupation, age, family size, nutrition education, income, and amount of money spent on food (Grotowski and Sims, 1978; Fusillo and Beloian, 1977; Sims, 1976; Cosper and Wakefield, 1975).

Throughout the literature, conflicting findings were reported regarding the nature of the association among nutrition attitudes, knowledge, and practices. Since no consensus was reached on the nature of the relationship between attitudes, knowledge, and practices for the conceptual model, nutrition attitudes and knowledge were reviewed as being related variables which interact to influence food purchasing practices.

Variables related to nutrition attitudes found in the literature were: education, occupation, and nutrition education. Education, occupation, nutrition education, sex, age, residence, food dollars spent, and number in household were found to be related to nutrition knowledge. Food purchasing practices were found to be related to nutrition education, education, amount of money spent on food, and number in the household.

On the basis of the relationships among nutrition attitudes, knowledge, and practices found in the literature, the conceptual model was designed. The model was tested in the study.

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215 MacKay Hall, Iowa State University, Ames, IA 50011

Objectives

The major objective of this study was to ascertain the nutrition attitudes, knowledge, and food purchasing practices of preschoolers' parents. Specific objectives were: (1) to identify nutrition attitudes, knowledge, and food purchasing practices, and (2) to compare parents' nutrition attitudes, knowledge, and food purchasing practices by type of program, sex, age, education level, family size, residence, occupation, nutrition training, and money spent on food eaten at home and away from home.

Selection of Sample

The target population of this study was parents, both mothers and fathers, who had preschool children attending a licensed day care center or a day care home in Iowa. By employing a systematic sampling technique, 50 centers were selected from each of three lists. The lists were day care centers receiving school lunch funds from the Department of Public Instruction, day care centers receiving funds from the Department of Social Services, and family day care homes receiving funds from either the Department of Public Instruction or the Department of Social Services.

Development of the Instrument

To accomplish the objectives of this study, a questionnaire was developed and consisted of four major parts: (1) general information, (2) attitudinal items, (3) knowledge items, and (4) food purchasing items. The general information section was designed to secure selected demographic characteristics about each parent. These characteristics served as independent variables. The attitudinal items sought parent's attitudes about nutrition and included a five-point Likert scale ranging from 5 "strongly agree" to 1 "strongly disagree."

The multiple choice format was used to assess parents' nutrition knowledge since it is the most versatile type of test item available and can measure a variety of learning outcomes (Gronlund, 1976; Cross, 1973). Three option items were used instead of two, four, and five option items because they are more reliable, students can respond more rapidly, and there are less problems for researchers to identify plausible distractors (Catts, 1978; Coston, 1970).

Several practices related to planning and making food purchases were identified as items. For each practice, parents indicated the extent to which they performed it by using a five-point scale with 5 indicating "very often" and 1 "never."

The six content areas represented in the questionnaire were nutrients, food sources, basic food groups, food buying, calories, and day care center meals.

The questionnaire was reviewed for content validity, plausibility of items, and appropriateness by experts from the Departments of Food and Nutrition, Home Economics Education , and Institution Management. Revisions were made and the questionnaire was pilot tested. The final questionnaire consisted of 9 demographic questions, 27 attitudinal items, 35 knowledge items, and 14 food purchasing items.

Data Collection

Of the 150 day care centers and homes invited to participate in the study, 104 granted approval to participate. For these centers, 6,370 questionnaires were distributed and 1,970 were returned.

Data Analysis

Data were analyzed from 1,769 questionnaires which did not contain any missing data. Reversed scoring was employed to facilitate the identification of attitudinal items with negative orientations. Four experts from the Departments of Food and Nutrition and Home Economics Education identified ten items with negative orientations.

Statistical procedures employed to analyze data for this study were selected from the Statistical Package for Social Sciences (Nie, Hull, Jenkins, Steinbrinner, and Bent, 1975) and Statistical Update (Hull and Nie, 1979). Frequencies, means, standard deviations, and variances were computed for all four parts of the questionnaire. Cronbach's Alpha reliabilities were computed to determine the consistency of responses to the attitudinal items, knowledge items, and food purchasing practices. A preliminary review of the attitude items showed that 13 items did not reach the criteria of an item-total correlation coefficient of .25 and thus were eliminated from the attitude total score. Fourteen items were used to determine a total attitude score for each parent by summing responses to these items.

Item-total score correlation coefficients were also calculated in an effort to form a food purchasing practices scale. Two of the 14 practices did not reach an item-total correlation of .25. Therefore, these items were deleted from the scale and the food purchasing practices scale consisted of 12 items. A total score for food purchasing practices was calculated for each parent by summing responses to the 12 items on the scale.

The reliability for the knowledge scale was calculated using all 35 items. All correct responses to the items on the knowledge scale (coded as 1) were summed to yield a total knowledge score for each parent.

Significant differences in parents' nutrition attitudes, knowledge, and food purchasing practices for each of the personal characteristics were determined by one-way analysis of variance. Relationships among nutrition attitudes, knowledge, and food purchasing practices were computed using Pearson's product-moment correlation (PPMC). The PPMC can be used to compute the correlation coefficient from two sets of scores. The coefficient is an estimation of the closeness of the relationship between the two variables correlated.

Discussion of Conceptual Model

In the model tested, two independent variables were related to nutrition attitudes, knowledge, and food purchasing practices: education level and nutrition training. Occupation was related to nutrition attitudes and knowledge. Money spent on food and family size were related to knowledge and food purchasing practices. Age, sex, and residence were related to knowledge. In the model both nutrition attitudes and knowledge were related to food purchasing practices (Figure 1).

Observation of the results presented in the path model showed that some of the proposed relationships were supported and some were not. The relationship of nutrition training to all three dependent variables was confirmed in the path model. Education level was related to nutrition attitudes and knowledge. Occupation did not have a significant influence on any of the three independent variables. Money spent on food outside the home was related to food purchasing practices, and family size was related to nutrition attitudes and practices, and not to nutrition knowledge. Age was related to knowledge. Sex was related to knowledge, nutrition attitudes, and food purchasing practices. Residence was related to food purchasing practices and not to nutrition knowledge. In addition, correlation coefficients showed that nutrition attitudes and knowledge were significantly related.

Conclusions

Findings in this study clearly demonstrated that parents' nutrition attitudes, knowledge, and food purchasing practices are related. More importantly, results indicated a stronger relationship betewen nutrition attitudes and food purchasing practices, than between knowledge and food purchasing practics. Based on these findings, nutrition educators should adopt as a major goal, that of designing educational experiences that promote favorable nutrition attitudes, and, which encouarge parents to apply their knowledge of nutrition when making food choices.

The findings in this study also suggested the importance of understanding the circumstances and conditions surrounding parents' environment. While the independent variables investigated in this study were weakly related to nutrition attitudes, knowledge, and practices, they do offer useful information for nutrition educators to consider when trying to modify effects on program results.

In conclusion findings revealed that a large amount of the variance in nutrition attitudes, knowledge, and food purchasing practices was unexplained by the variables used in this study. Therefore, the influence of other variables should be investigated. Only when the most influential variables are identified and controlled, can nutrition education programs be effective in facilitating positive changes in nutrition education, knowledge, and food purchasing practices.

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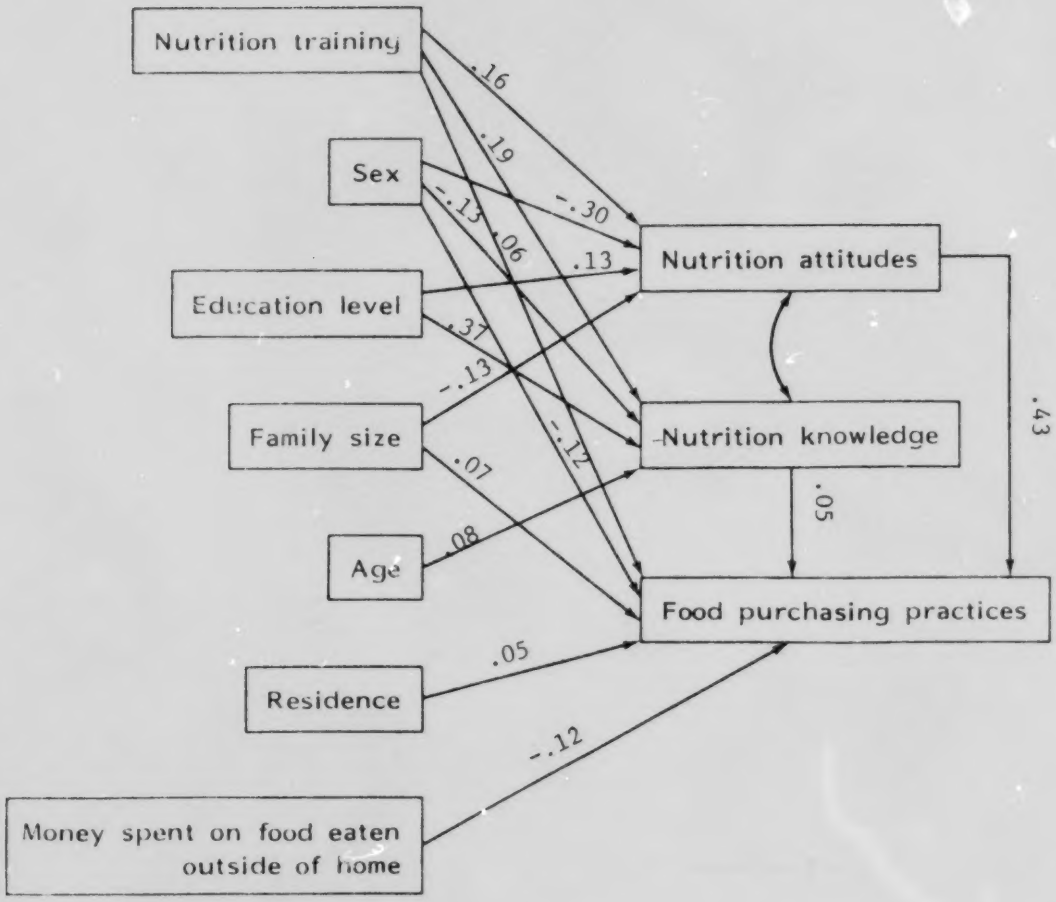

Figure 1. Path analysis of relationships among variables

ADMINISTRATIVE BEHAVIORS DEEMED IMPORTANT BY LOCAL ADULT BASIC EDUCATION ADMINISTRATORS FOR PROGRAM SUCCESS

By

James V. Bina, Ph.D.

The Ohio State University

INTRODUCTION

Limited resources and the continued demand for successful local Adult Basic Education (ABE) programs will require proficient administrators. To aid the development of this capability of administrators, empirical evidence of activities performed by administrators is needed to build a body of theory and tested knowledge about their role at the local level. Numerous national and state ABE studies have been conducted, however this study addressed the need for baseline information about administration of ABE programs at the local level.

The purpose of this study was to determine which administrative behaviors local ABE administrators in Ohio considered conducive to a successful local ABE program and the extent to which such behaviors were performed. Specific information examined in this study included: (1) respondent characteristics; (2) program characteristics; (3) perceived importance of administrative behaviors for program success; (4) perceptions compared with performance; and (5) associations of perceptions with demographic and program variables.

METHODOLOGY

The population surveyed for this study included administrators of the adult basic education programs in Ohio public school districts. There were 117 administrators of ABE programs in local school districts. One hundred and eight questionnaires were returned for a response rate of 92.31 percent.

Questions and comments may be addressed to James V. Bina, 6141 Orchard Lane, Groveport, Ohio 43125

The data needed for this study were collected via a mail questionnaire. The instrument was developed by the researcher based on searches of the literature, interviews with State Department of Education personnel and the investigator's experience with ABE programs at the local level. The development of the instrument included a pilot-test with ABE educators to refine the questionnaire. Final reviews of the instrument were conducted for possible revisions. The instrument received human subjects clearance.

The instrument had three sections: (1) 68 administrative behaviors with a Likert-type scale of 1) low to 7) high for the respondent to indicate perceived importance for a successful ABE program; (2) a performance category for the respondent to indicate whether the activity is performed; and (3) administrator and program characteristics. The 68 administrative behaviors were categorized into 11 functional areas: (1) Needs Assessment; (2) Advisory Committee; (3) Supervision and Inservice; (4) Evaluation; (5) Financial Management; (6) Recruitment; (7) Support Services; (8) Community Relations; (9) Interaction; (10) Materials, Facilities and Equipment; and (11) Professional Development. The administrator characteristics included years in ABE position, percentage of professional time used to conduct ABE program, previous employment with school district, highest degree held, major field of highest degree, national conference attendance, state conference attendance, age and sex. The program characteristics included program enrollment, number of full-time and part-time paraprofessionals, number of full-time and part-time teachers, number of full-time and part-time administrators and type of school district.

Data were analyzed through the use of a variety of statistics. Standard statistics such as means and standard deviations were calculated. Statistical significance was established at the .05 level. Four correlation coefficients were utilized.

Specifically, the Pearson product-moment correlation coefficient was utilized to measure the association of the 68 administrative behaviors with the following: (1) years served; (2) percentage of time used to operate ABE program; and (3) age. The Point-biserial correlation coefficient was calculated to measure the relationship with: (1) previous employment; (2) attendance at National Adult Education Conference; (3) attendance at State Adult Education Conference; and (4) sex. The Spearman-rank correlation coefficient was used with the highest degree of the respondent. The Biserial correlation coefficient was calculated with the major field of the highest degree of the respondent.

The Pearson product-moment correlation coefficient was calculated with the following program variables: (1) enrollment; (2) number of full-time and part-time paraprofessionals; (3) number of full-time and part-time teachers; and (4) number of full-time and part-time administrators. The type of school district was associated with the administrative behaviors through the use of the Biserial correlation coefficient.

FINDINGS

Findings are summarized within five areas: personal information; program information; perceived importance of administrative behaviors; performance of administrative behaviors; and correlations of the perceived importance of administrative behaviors with selected personal and program variables.

Personal Profile

The typical Ohio ABE administrator is likely to be male, approximately 41 years of age, with a master's degree in Educational Administration. He spends less than one-third of his professional time administering the ABE program and attended a state adult education conference but not a national one during the past 12 months.

Program Information

Most ABE administrators in Ohio had an enrollment of about 100. Approximately 22 percent of administrators had full-time paraprofessionals whereas approximately 69 percent had part-time paraprofessionals. Likewise, 25 percent of administrators had full-time teachers while 87 percent had part-time teachers. About 6 percent of respondents had full-time administrators while 96 percent had part-time administrators. Finally, the typical ABE program is conducted through a City School District.

Perceived Importance of Administrative Behaviors

The question for each of 68 administrative behaviors was: "To have a successful ABE program, how important is this administrative behavior by the ABE administrator?" With a mean of 6.702, the administrative behavior, evaluating whether the ABE students are learning, was considered the most important behavior to have a successful program.

The means (by averaging) of the 11 categories of administrative behaviors indicate that Financial Management and Recruitment were the most important behaviors while the Professional Development category was considered the least important set of behaviors.

Perceptions Compared with Performance

Respondents were asked to indicate whether each of the 68 administrative behaviors was performed. The data indicated that the administrative behaviors with high means for perceived importance tended to have corresponding high performance percentages. The administrative behavior with the highest mean (perceived importance) had a 100.0 performance percentage. Likewise the behavior with the lowest mean had the lowest performance percentage (30.2 percent).

Associations of Perceptions with Personal and Program Variables

The 68 administrative behaviors were correlated with 9 personal variables and 8 program variables for a total of 1156 correlations. Significant relationships were found in 17.0 percent of these correlations.

All of the 17 personal and program variables had at least three significant relationships with the administrative behaviors. Approximately 94 percent of the administrative behaviors had at least one significant relationship with the personal and program variables, while 6 percent did not. These four administrative behaviors are: encouraging teachers to develop their own supplemental instructional materials; recruiting through television; purchasing ABE materials and supplies; and purchasing ABE equipment.

DISCUSSION

The major conclusions and recommendations about administration of local ABE programs are highlighted in this section.

Conclusions

1. A disparity seems to exist between the literature and practice at the local level. Experienced administrators generally placed limited value on these 68 administrative behaviors which were identified in the literature to be conducive to a successful local ABE program. This may be due, in part, to the recognition and reflection of the limited value placed on these behaviors by local superintendents and Board of Education members. Incentives and "signals" provided by these key individuals may confirm the administrative behaviors they consider to be important.

2. Perception of many of the administrative behaviors as unimportant tended to be characteristic of the administrator with an advanced degree who was promoted from within the existing school district staff and did not attend a national or state adult education conference. This seems to contradict the

literature and commonly held beliefs about adult education. This disparity may be due, in part, to the lack of formal training in adult education in general and ABE in particular on the part of the majority of current local ABE administrators.

3. Promoting a person to be the ABE administrator from within the existing school district staff will in all likelihood result in less performance of these 68 administrative behaviors. Over 60 percent of the administrative behaviors, especially those related to needs assessment, the advisory committee, inservice, support services and professional development will be perceived to have limited value by the administrators hired from the local school staff.

4. Involvement with more individuals such as teachers and groups such as the advisory committee was exhibited more often by administrators who did not hold advanced degrees. Perhaps these behaviors are not sufficiently emphasized in graduate programs.

5. Limited priority was placed on utilizing personnel of state colleges/universities to improve the local ABE program. Benefits to both the higher education and the local personnel could result through the sharing of the expertise and experience of both parties.

6. Administrators who submitted proposals for demonstration programs were usually from the larger programs which were based in city school districts. Historically these funds for demonstration programs have been awarded to large city programs that had submitted proposals.

7. Managing ABE finances and recruiting new learners were the two categories of behaviors receiving the highest priority by local ABE administrators. Undoubtedly this is a result of the typical context of the ABE administrator which necessitates that the program be self-sufficient. Moreover, the ABE administrator's supervisors typically judge his performance based on the number of program participants. This situation is evident despite the existence of ABE student "waiting lists" for some programs. Attention should be given to increased efficiency of recruitment and financial management efforts.

Recommendations

Based on the data collected and analyzed in this study the following recommendations are made with regard to local ABE administrators, local superintendents, university/college faculty, state education personnel and researchers.

1. Local ABE administrators should try to provide or arrange services to ABE students such as childcare, job placement services and transportation.

2. ABE administrators should develop stronger community-school relationships which can result in the co-sponsorship of the ABE program.

3. Superintendents and Board of Education members of local education agencies should increase the emphasis they place on the ABE program in terms of size of staff and other resources.

4. Superintendents of local school districts should seriously consider "outside" candidates when hiring the ABE administrator for the school district.

5. Local ABE administrators and college/university personnel should increase their efforts to work together on ABE concerns.

6. Graduate programs for ABE administrators should stress the value of involvement with teachers, students and community groups, especially the advisory committee, since this is conducive to a successful local program.

7. The State Department of Education should review the procedures for awarding demonstration contracts and grants to local programs. Encouraging more program administrators to submit proposals should increase the potential state-wide impact.

8. The study should be replicated with local education agencies in other states and on a nation-wide basis to test the generalizability of these findings. Further study of these 68 administrative behaviors could facilitate the level of proficiency of local ABE administrators.

9. The local superintendents' perceptions of the importance of the administrative behaviors should be investigated. Comparisons of the local ABE administrators' perceptions with the superintendents' perceptions could identify further inservice topics for both groups.

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The Learning-to-Read Process of the Adult Beginning Reader[1]

Nancy E. Boraks, Ph.D.
Virginia Commonwealth University

INTRODUCTION

Learning differences between child and adult learners have been discussed (Zahn, 1967; knowles, 1977), yet there are limited findings clarifying how these differences operate in the learning-to-read process. This may, in part explain why most instruction of adult beginning readers (ABRs) is based on research and related methods for the child beginning reader or adult proficient reader.

Available research on adults' reading behavior has focused upon college students reading above a third grade level. These studies do, however, confirm child/adult differences in reading behavior. For example Monroe (1932) studied the reading behavior of children and several adults with reading difficulty and reported that the adult readers "showed marked variations from the standards for fourth-grade children." (p. 69). Raisner (1978) also studied college-age adult non-proficient readers and reported that these adults made greater use of phonemic and graphic cues and much more limited use of semantic/syntactic cues than children. Boraks (1978) in one of the few studies on the reading behavior of an adult basic education population reported that adults varied greatly in their use of available cues, using semantic cues less than children and having a different pattern of use

[1]This research was supported by a grant from The Adult Education Service, Richmond, Virginia.

of graphic/phonemic cues (p. 9). No attempt was made in these studies to relate the ABR's evolving strategy to subsequent achievement or to study behavior over time-that is, to identify learning-to-read behavior.

Reading behavior is often described in terms of the cues used to correctly identify words; i.e. graphic (visual), phonemic (sound/symbol relationship), semantic (word meaning), and syntactic (grammatic structure) cues. Thus, reading behavior, as used here, will designate use of these and related cues.

The purpose of this study was to 1) describe the learning-to-read behavior of adult beginning readers and 2) consider the evolution of these behaviors over a period of time in relation to achievement in order to identify specific reading behaviors inhibiting/facilitating learning.

METHODOLOGY

The learning-to-read behaviors of ABRs, were expected to vary due to a variety of developmental and personological factors. It was also assumed that the learning context and instructional method would impact upon reading behaviors of ABRs. To identify the impact of these personological, developmental, instructional and contextual factors on reading behavior, it was decided to observe behavior in naturalistic settings. Committment to a single theoretical framework to guide observations and analysis of data was avoided for three reasons: 1) evaluations of available models of reading has led experts to conclude that these models are exploratory and incomplete (Davis, 1972; Singer and Ruddell, 1976); 2) a single model may be inappropriate if individuals learn through different processes (Gibson and Levin, p. 148);

and 3) most available models are based on research with adult proficient readers or children.

The committment to use an open observation system in a naturalistic setting resulted in the use of an ethnographic research methodology. This was considered especially appropriate for as Boraks, (1979) points out neither the ABR not their learning context lend themselves to study within a randomized, controlled, experimental framework.

The participants of this study included all ABRs who were enrolled in beginning reading classes at two centers in a urban area of the southeast. Three classes and a variety of tutoring situations were observed. All ABRs and teachers contacted agreed to participate. However, since the sites were selected due to proximity the sample is considered a non-random sample of convenience and an attempt to generalize results to other populations is not suggested.

Over 60 ABRs were observed for an eight month period. Observations were conducted bi-weekly during each of the adults two hour reading classes or one hour tutoring sessions. An indepth analysis of only 15 adults is reported here. These adults ages ranged from 14-60; approximately 50 per cent were black, 50 per cent white; 50 percent male, 50 per cent were female. Adults' jobs and residential areas indicated adults were from a low economic, inner city population.

Observers included two graduate assistants, one reading specialist and one research specialist. All were trained in field observation procedures. Field notes were discussed at weekly staff meetings. Data was also obtained through periodic (every 4-6 weeks) testing using specially constructed word

lists, paragraphs and comprehension questions. Teacher and student interviews supplemented data.

RESULTS

Categories currently used to describe the oral reading behavior of children were found inadequate. For example, initial field observations demonstrated that rich information on adult reading behavior could be obtained by a careful analysis of ABR's successive attempts at words and by a more indepth study of graphic cues (e.g. number of adjacent letters correctly identified).

ABR's varied in ability--from those just learning to recognize letters to those who could read with some difficulty, material traditionally labeled as third grade. Reading behavior of ABRs achieving at different levels varied, although all ABRs tended to make similar use of graphic cues-that is, all usually correctly identified initial letter, seldom identified medial letters and varied within ability group in identification of final letters. Behavior in reading word lists and paragraphs was more stable for higher ABR achievers than for those at the initial stages of learning. When reading text, the higher achieving ABRs made relatively more balanced use of beginning, middle and ending letters but used relatively fewer adjacent letters as patterns. Thus, exact recognition of patterns (e.g. phonograms) did not seem to facilitate achievement. Achievement seems to be associated with willingness to make overt successive attempts and to vary these attempts. Higher achieving ABRs did not make significantly higher use of semantic or syntactic cues than other ABRs.

Reading behaviors of ABRs, as determined by periodic testing, seemed to evolve as they progressed. Behavior was not only variable but highly idio-

syncratic and it is varied within class, based not so much on instruction, but on the pre-reading framework provided by the teacher. If story meaning were discussed, all ABRs used more syntactic/semantic cues and made fewer miscuses. If instruction in word identification skills preceded orally reading, ABRs made more use of graphic/phonemic cues and made more miscues.

ABRs who made progress tended to be those who would 1) identify what they knew about and within a word, 2) make successive attempts holding one element constant, 3) manipulate the vowel (i.e. read hide as ho, here, hi), 4) monitor meaning, 5) segment words in syllables or approxiamtions or known parts, and 6) correct in phrases. Readers who made less progress would 1) identify what they knew in terms of an outside referent (i.e. look at bat and say-that looks like hat), 2) make successive attempts, holding no single correct word element constant (i.e. read ship: park, puch, stip, part), 3) fail to persist, 4) fail to monitor meaning, 5) use a different pattern of word cues in paragraphs than in lists. These factors may simply suggest word identification strategies were less stable for ABRs who made less progress. All ABRs tended to spell out letters of words at times to help identify words and all made surprising low use of semantic cues. In this way the adults varied greatly from the child-beginning reader.

Classroom observations on all 60 ABRs suggest that 1) instruction in use of syllables was related to success in using decoding skills, 2) ABRs who could not discriminate, segment or blend phonemes tended to rely heavily on graphic cues, 3) teachers of ABRs may be inhibiting use of semantic/syntactic cues by not preceding reading with discussions of content.

DISCUSSIONS

Four conclusions seem warrented from this exploratory research on the learning to read behavior of ABRs: 1) ABR's reading behavior differ from the child beginning readers, 2) ABR's oral reading behavior varies more in relation to immediate type of presentation of text than to general instructional methods, 3) current modes of describing reading behavior for children (i.e. miscue analysis frameworks) may be too restricted for adults, and 4) specific facilitating/inhibiting reading behaviors of ABRs are identifiable.

The description of ABRs is only the first step in developing strategies for effective adult reading instruction guidelines. Factors influencing these strategies need to be identified, the feasibility of teaching non-achieving ABRs the strategies of successful ABRs has to be evaluated, the need to adopt current instructional programs to provide for needed subskills (e.g. segmenting) has to be studied and the generalizability of ABR's reading behaviors as described here must be explored further.

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JOHN CONDLIFFE CONFRONTS CAPTAIN KIRK: A NEW ZEALAND PERSPECTIVE ON MANDATORY ADULT EDUCATION DURING WORLD WAR I

Roger Boshier
University of British Columbia, Vancouver, Canada*

INTRODUCTION

Prior to World War I professional soldiering had a dismal education history. Even at the beginning of W.W.I. army education was regarded as a luxury of peacetime. Troops were supposed to kill and, in the British army, Lord Gorell (A W.E.A. and World Association for Adult Education enthusiast) was accused of being a bolshevik because he wanted to educate soldiers. But as W.W.I. stiffened into a stalemate authorities had to cope with thousands of wounded, demobilized, bored, and potentially troublesome soldiers. Thus, late in the war, education schemes were created. The New Zealand Expeditionary Force Education Scheme became a model for other armies but its operations were shrouded in controversy concerning the extent to which soldiers should be compelled to participate.

It is the voluntary, democratic character which, for some writers (e.g. Lindeman, 1926) distinguishes adult from other branches of education. Democratization involves the removal of barriers that impede access to education and, secondly, the widespread involvement of learners in program planning and the design and management of instruction. The need to democratize adult education has been reiterated many times (e.g. Faure, 1972) and lays behind current campaigns to oppose mandatory continuing education (see Ohliger (1974)). The modern democratization movement is allied with attempts to "empower" learners (e.g. Freire, 1972) to involve them in "participatory" research (e.g. Hall, 1975) and innovative learning (Botkin, et al, 1979). Ideally, adults are "volunteers for learning".

Modern proponents of volunteer learning operate in a society that ostensibly places a high priority on personal freedom and choice. In contrast, people wanting to democratize adult education in W.W.I had limited personal freedom and choice. Indeed, when John Condliffe, Percy Burbidge, Tom Adams, Bert Tocker, and other "voluntarists" who worked for the N.Z.E.F. education scheme attempted to promote volunteer learning they incurred the wrath of military authorities. But they were a formidable group, antipodeans - New Zealanders - W.E.A. men committed to adult education and the do-it-yourself ethos. Although operating in unusual circumstances, their demands have contemporary significance.

John Bell Condliffe volunteered for service with the N.Z.E.F. after the Gallipoli casualty lists "made it a duty to do so" (Condliffe, 1979). On board the troopship Ruahine Condliffe gave lectures on "money" and the history of New Zealand and Germany. He and his friend Tocker also enlivened the voyage by publishing the ship's newspaper.

On his 26th birthday (December 23, 1917) Condliffe was ordered into action with a carrying party at Ypres. There were few organized lines, only knots of soldiers clustered in trenches and on exposed "lookout" mounds. The situation was chaotic, a "charnel house", fought over for years without respite. Artillery showed up days late. Failures of large scale organization were everywhere. The casualties had been immense. Condliffe was part of a carrying party, but, loaded down with a rifle, 100 rounds, rations, iron dixies and a sack of coke, lost contact with his platoon and spent a freezing night wandering through trenches in

*Roger Boshier is Associate Professor in the Department of Adult Education, University of B.C., 5760 Toronto Road, Vancouver, B.C., V6T 1L2, Canada.

No-Mans-Land. Eventually he found an English batallion that directed him to the New Zealanders. Shortly thereafter he was posted to a lookout mound on the Butte de Polygon where an attack was expected. At the first sign of action the young W.E.A. lecturer was to fire a rocket, and theoretically, artillery would open from behind. An attack came but the main thrust was at Paschendale - next door. In the morning Condliffe was summonsed to the cookhouse, a sand-bagged lean-to at the top of a short flight of steps. Just as he neared the door a German shell arrived. His dixie tin was holed in two places, his eyes were blinded by gas, his eardrums ruptured but, despite alarming cables to New Zealand, Condliffe was basically intact. He was carried to the casualty station under the Polygon grandstand and then taken over three miles of duckboards to a hospital under the walls at Ypres.

During frozen nights in French trenches Condliffe had had plenty of time to contemplate the boredom that afflicts soldiers. Now, in Brockenhurst hospital, England, he had even more time to ruminate over the need for army education. The authorities did not think education was congruent with military goals. Indeed, as authors of the 1919 Report observed, "some of those in authority ... viewed the efforts to provide education for soldiers in wartime with mingled astonishment and skepticism" (Final Report, 1919, p. 343). One day Condliffe was approached by Mrs. Edward Wilson, wife of the Antarctic explorer. She had been organizing therapy for limbless soldiers at Oatlands hospital and now provided Condliffe with Barrie's "Homily on Courage", in large print. During walks through the New Forest, she encouraged the New Zealander to implement ideas concerning army education.

In March, 1917 the New Zealand YMCA, supported by Mrs. Wilson, had created a small education program for hospitalized soldiers. According to Richardson (1923), the General Officer in Charge of the N.Z.E.F. in the United Kingdom, "the results were encouraging." In his view a "larger application was worthy of a fair trial." Increasing numbers of convalescent soldiers needed to use spare time; vast numbers of men needed to be "re-educated" because they could not follow previous occupations; nearly 60,000 men needed to be gainfully occupied during a process of demobilization which, it was estimated, would take at least eighteen months. The end of the war was in sight and no one expected thousands of restless New Zealanders to submit to army drill for which there was no further use.

AN EDUCATION SCHEME

Thus, on January 31st, 1918 General Richardson appointed Captain J.R. Kirk as the organizer of an education scheme and, on April 29th, 1918, called a seven day conference of soldiers familiar with W.E.A. and general education work. Thirty people were present. The YMCA "Triangle Trail" (May 25, 1918) spoke of the scheme in optimistic terms laced by wartime exaggeration. The scheme is "one of the milestones of New Zealand history - a period during which was developed a scheme that cannot fail to have an immense influence for good." The report contained a group photograph - with young Condliffe in the front row - a synopsis of General Richardson's ideas and a summary of the proposed curriculum. But under the optimistic glow were serious disputes over the extent to which participation should be voluntary. Even Richardson (1923), in the "official" history of the war, devoted several paragraphs to the "compulsory versus voluntary" aspects of the system.

Captain Kirk was a lawyer and, according to Condliffe (1981) wanted to run Grade 3 (primary school) classes for adults. Men would be marched into a room, ordered to sit and listen to the lecture for the day. Condliffe was committed to voluntarism. From the back of the room he let the Captain know his opinions. He would subsequently become a leading member of the Cambridge University union debating team. On his feet Condliffe was witty and articulate. Duly scolded, Kirk now rebuked the young soldier. But Condliffe persisted to a point where Kirk

reminded him that he was "in the army" to which Condliffe retorted "You can parade me in front of a class but you can't make me teach." He later admitted in a letter to Hight (September 9, 1918) back at Canterbury, that he was the "stormy petrel" at Kirk's meeting, "one of the most troublesome flies in the official ointment." Tocker was "runner-up for that position," and, as a result of having expressed "voluntarist" views earlier, was not invited to the official meeting. The argument centred around the extent to which military goals were compatible with voluntarist principles and the utility of "general" versus "vocational" education. Kirk wanted "to produce a paper scheme that would be built on quantity instead of quality" (letter September 9, 1918). Condliffe felt he and his allies, Percy Burbidge, Tom Adams (and Bert Tocker, in absentia) "scored a few wins on important points" and considered Richardson to be more supportive of their views than Kirk. But Richardson was siding with compulsory attendance. If soldiers have to attend "the lectures on civics and economics ... (it would) ... render them better qualified to sift the grain from the chaff when listening to revolutionary speakers, seeking to sway by their eloquence, rather than by arguments based on facts and knowledge." (1923, p. 222) Nevertheless, Condliffe (1981) maintained that Kirk's scheme would have caused "riots in the camps." When the meeting ended on May 6, 1918, the matter had not been officially resolved but on June 10, 1918 the N.Z. Command Depot at Codford introduced "compulsory" instruction; on June 27th the infantry brigade at Sling had classes on a "voluntary" basis; in August "compulsory" education was introduced at Ewshot. Through the good offices of Horace Fawcett, a Dunedin schoolteacher acting as a YMCA secretary, Condliffe was posted to Hornchurch convalescent camp where he was soon joined by Tocker, Burbidge, and other "voluntarists." Work also commenced at Brocton, Grantham, Brockenhurst; the work with "limmies" at Oatlands went on.

Hornchurch permitted men to choose their classes even though some procedures were militaristic. When a man entered the camp from any hospital he was admitted by a medical officer and given a card upon which were written his "treatment and training appointments." At the top of the card was marked "Education." The soldier would take the card to the various departments, including the one for Education. Condliffe (letter August 9, 1918) said "any morning you can see a long queue of men waiting to report to the sergeant in charge of the education rolls." As they waited their turn the men scanned the list of classes from which they could choose: English, French, Economics, Bookkeeping, Shorthand, Basket work, Stained Glass, Building Construction, Bootmaking, Carving, Joinery and Cabinetmaking, Wool-Classing, Dairy Science, General Agriculture, Fruit Farming, Poultry Keeping, Surveying and Levelling. If the soldier could not choose, he was likely to end up in the Economics class run by Sgt. Condliffe.

The popularity of Economics, and Condliffe's participatory teaching techniques, ensured the success of his part of the program. Thus in a letter of July 9, 1918, he was able to tell Hight that "if you imagine my W.E.A. work multiplied about 50 times, you have my situation!" "I am lecturing on subjects that present themselves in sequence, they interrupt to question, confirm or disagree and the whole class is more like a round table conference than a lecture ... New Zealand soldiers ... are critical; but there has been no difficulty in keeping their attention. My methods are far from orthodox ... I use blackboards and diagrams freely and soon I'll be using a little magic lantern."

His techniques were more "andragogical" than some modern adult education. Thus, when teaching Economics to men who would return to be farmers in New Zealand, "we built up a rough balance sheet of a typical cocky's dairy farm, and when we got his year's profits, we dissected it into the elements - interest, wages, risk payments, war profits, etc." (Letter, August 9, 1918) The men were enthusiastic.

Even the General dropped in for "merry discussions" at Hornchurch. But on one occasion a soldier in a wheelchair described Richardson's contribution as "a lot of bloody rot." Shortly thereafter Condliffe was "sent for", given a travel warrant and told to go on a holiday. Participation has its price.

Despite temporary setbacks and problems associated with the rapid expansion of the scheme, the voluntarists were firmly ensconced at Hornchurch. The number of important visitors multiplied; members of the 1919 report committee and the chiefs of education in the British, American and Canadian armies all came to the camp. Hornchurch had become a showpiece and other countries modelled their schemes on it. Other camps sent instructors for training. But now Kirk claimed credit for the work and continued to impose "compulsionist" policies.

TAWNEY INTERVENES

In his letter of August 9, 1918, Condliffe recalled the May conference and said "the points that we did not win, we have not forgotten, and we are still working in every way possible for what we believe are much needed reforms in organization." The voluntarists had little patience with the violation of adult education principles inherent in Kirk's ideas. By August 9, 1918 "the struggle has developed almost into a contest between Captain Kirk and those of us who wish to get control of our own subjects. He is now openly opposed to this, knowing well that if we do get control we will insist on teaching thoroughly and on sound lines." "It is certainly true to say that our relations with Captain Kirk, never very cordial, are decidedly strained. Still there is every reason to believe we will win out in the end ..."

Condliffe was optimistic because during weekend visits to the London headquarters of the W.E.A. he had made contacts that would prove useful in a showdown with Kirk. On July 9, 1918 he had been invited to attend W.E.A. summer schools at Cambridge and Oxford. The previous Thursday he had been at a W.E.A. meeting inveigling Tawney, Zimmern, Hartley, Withers and Pember-Reeves into lecturing at Hornchurch. On July 11 Condliffe and Tuck were back at W.E.A. headquarters where the "feeling was very cordial." During one of these forays into London, Condliffe and Mansbridge met at a teashop and "concocted" the World Association of Adult Education. The Oxford Summer School impressed Condliffe "tremendously." He met A.L. Smith, Master of Balliol, and R.H. Tawney, who had just been elected a Fellow of the College.

By September, 1918 Condliffe's W.E.A. friends were often at Hornchurch. Canon J.H.B. Masterman "lectured to the boys" - 400 of them - on a League of Nations. The following day Mansbridge and Arthur Greenwood were at Hornchurch lunching with Condliffe, talking with soldiers and gathering information for the Second Interim Report (1918) of the Adult Education Committee. (Condliffe wrote the New Zealand section.) As was his custom, Mansbridge had dinner in the mess, was presented with a pound of New Zealand butter, and left at about six o'clock. The bench outside Condliffe's hut became a meeting place for "conspirators." Most were academics who formed a "committee to collect information on university organization." September 19, 1918 was typical. "Outside our hut ... there was quite an interesting group: Mr. Mansbridge, an American headmaster, Mr. Fawcett, Wilding, Burbidge ... myself and Hill. (Letter, September 20, 1918.)

Condliffe felt more comfortable with "conspirators" than with lawyers. Codford, the "compulsory" camp was run by an Auckland solicitor ("he has all the vices of his tribe") who was a "thorn in our flesh" and a failure. "There are no enrolments, ... no choice of subjects. At certain intervals during the day, the men are marched off to the parade ground to lectures, and until they get into the classroom they do not know what is going to be served up." The so-called

teacher stood on a table at the end of a hut and ranted on "like a soap boxer." There was no evidence of "true teaching."

The voluntarists wanted both learners and teachers to have some control over program planning as well as instructional processes but Kirk was "afraid his mana (reputation) would decline if he allowed us to interfere." Kirk said General Richardson was opposed to the "interference" proposed by the voluntarists. But when Fawcett secured an interview with Richardson, it turned out that it was Kirk, not the General, who opposed the democratization process. Richardson promised to call a conference to resolve the matter. By October 4 it was still unresolved. But things were about to change. "After persistent agitation we ... are about ... to get some satisfaction, though one does not know yet just how far our demands will be met. Of course, being in the army, agitation is difficult and has to be done sub rosa and second hand." (Letter October 4, 1918.) Condliffe then received an open travel warrant, promotion to Sgt. Major and the opportunity for leave. He gravitated to W.E.A. friends in the English universities and sat in A.L. Smith's garden with R.H. Tawney. There was talk about the tensions between Kirk and the voluntarists. Tawney knew the background to the problem, was an advocate of democratization, disliked pomposity and promised to tell the Master of Balliol (A.L. Smith) about this "bloody scoundrel" (Kirk). Smith discreetly asked Condliffe if General Richardson would appreciate an invitation to Oxford. Shortly after the Tawney encounter, Condliffe was ordered to report to the General's office. Kirk was being sent back to New Zealand on the next troopship; General Stewart, Condliffe's university colleague from Canterbury, would be in charge of the Education Scheme; Condliffe would be promoted to Captain. Moreover, Kirk's plan to split the voluntarists by sending them all to different camps would be abandoned. At this time A.L. Smith was hard at work on the 1919 Report but, acting on Tawney's advice, had apparently persuaded Richardson that Kirk must go. It was a victory of sorts but Condliffe, the "stormy petrel", would also pay a price. Within three days, he was demoted.

NEW BEGINNINGS

By August, 1918 well over 8,000 men were enrolled in classes arranged by the N.Z.E.F. Education Scheme. There were educational facilities in ten large New Zealand camps and hospitals. The limbless school had trained 400 men subsequently placed with commercial firms. Educational work was even arranged on troopships returning home. For Condliffe and the voluntarists, Kirk's departure was a personal and professional triumph but did not represent a wide-scale rejection of compulsory education. When Stewart took over he not only demoted Condliffe, but made Economics (Condliffe) and Physics (Burbidge) compulsory for all ranks. Instruction would consume four hours of each day in camps and three hours on troopships and in hospitals.

By early 1919, men were disembarking in large numbers; Hornchurch was closed in March. According to Richardson (1923) there was a "positive record" that 13,152 men had received instruction in one or more subjects. Of these, 12,000 had attended "parade lectures" in Economics and Civics, History or Geography. Toward the end of the war when food was short, farming "pupils" were put to work. According to Richardson, "Hornchurch set the example and demonstrated the possibilities."

The N.Z.E.F. voluntarists were in a situation in some ways similar to modern educators trying to implement "adult" principles in "curriculum" or "training" settings. In times of rapid change, societal dislocation or national emergency, macro-level needs often transcend the preferences or democratic "choices" of individuals. Like modern professionals forced to work in mandatory continuing education settings, the voluntarists were unable to ensure that learners could

fully choose their own programmes. But despite this constraint, their instruction was democratized, participatory, inspired. The attempts to democratize army education were only partly successful. But it left the voluntarists undaunted, and teaches modern adult educators lessons with contemporary significance.

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EDUCATION PARTICIPATION SCALE FACTOR STRUCTURE AND CORRELATES FOR TWELVE THOUSAND LEARNERS

Roger Boshier and John Collins
University of British Columbia, Vancouver, Canada

INTRODUCTION

Since the start of the modern era of adult education in 1919 there has been a persistent interest in reasons, or motivational orientations, that impel people to participate in adult education. Conventional wisdom asserts that program planners should use knowledge concerning motivational orientations to develop program content, processes and methods "congruent" with adult needs. Early adult educators such as Lindeman (1926) and authors of the 1919 Report were cognizant of the need to tailor programs to "adult" needs. Educators should heed the diverse reasons that impel adults into education. Modern educators such as Knowles (1980) agree with their forebears. Indeed, for many, it is the unique nature of "adult" needs and motives that gives adult education part of its distinctive character.

Despite the continuing interest in and emphasis on the importance of studying adult needs, "motives", "reasons" or "motivational orientations" that flow from them, until about ten years ago participation researchers had no psychometrically and theoretically defensible instruments capable of measuring the phenomenon of interest. Indeed, when Johnstone and Rivera (1965) conducted their large-scale survey, "motivation" was measured by asking interviewees to respond to a short checklist of statements embedded in a long interview schedule; they offered no evidence that their instrument was reliable or valid. Moreover, when Houle (1961) conducted his qualitative study, the instrument employed never became available for public scrutiny.

In one attempt to remedy this situation Boshier (1971) developed the 48-item Education Participation Scale which, in 1976, was refined to a version with 40 items cast on a four-point scale.[1] Since then it has been widely used in many parts of the world. The literature employing the E.P.S. suggests that discernible "research traditions" are emerging. Although authors of articles published in Adult Education now cite more "primary" literature than they did ten years ago (Boshier and Pickard, 1979), researchers in this field are still producing ad hoc research and expending energy "re-inventing the wheel". Thus, the emergence of a motivational orientation or, for that matter, any kind of research tradition, is a welcome development in adult education. Moreover, the availability of a large data base from participants in different cultures, socio-economic, sexual, occupational and national groups, provides a rare opportunity for secondary analysis. Most importantly, the assemblage of a large data base enables integration and synthesis of hitherto "isolated" studies.

Boshier (1979) has already described several unfortunate outcomes for adult education that flow from the uncodified and "chaotic" nature of research. Many researchers in adult education produce "one-off" studies and there are too few attempts to perform secondary analyses on extant data. Some commentators feel the lack of integration has led to crisis. Schutz, for example, had harsh words for the U.S. National Institute of Education when questioning the extent to which they should add to the piles of unconnected and atheoretical findings. Schutz finds it

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Roger Boshier is an Associate Professor in the Department of Adult Education, University of B.C., 5760 Toronto Road, Vancouver, B.C., V6T 1L2, Canada. John Collins is Project Director for the Canadian College of Health Service Executives and President of Collins Associates, 3631 Marine Drive, West Vancouver, B.C., V7V 1N3, Canada.

[1]The E.P.S. is under copyright. Scales, scoring keys and instructions are available from Learningpress Ltd., P.O. Box 46403, Station G, 3760 West 10th Ave., Vancouver, B.C. V6R 2G0, Canada.

> ... a disservice to continue to pile up hundreds of isolated studies with findings that cannot be combined for analysis due to incompatibility of research design. Before the staggeringly large number of uncodified educational studies can be identified and integrated, a better understanding of knowledge synthesis must be gained (1977, p. 4).

None of this means adult educators must suspend plans for innovative research but it does reinforce the need to integrate existing data into theoretically and empirically well grounded contexts.

For adult education in general, and motivational orientation researchers in particular, a secondary analysis of E.P.S. data appears warranted for several reasons. First, secondary analysis of extant data saves money, time and personnel. Secondly, it expands the types and numbers of observations to cover a broad array of settings and participants. Thirdly, secondary analysis of "comparative" data gathered at different points in time provides an opportunity to measure changes in relationships between E.P.S. scores and socio-demographic variables. Some relationships endure through the vicissitudes of time, culture, age or financial fortune. As Hyman (1972) notes, such findings verge on the kind of powerful generalizations sought by social scientists. Moreover, large samples insulate against hasty conclusions that may be locally true, but artifactual in the general sense. It is through the combination and analysis of data from different time periods and cultures that knowledge is amassed that would otherwise be fractionalized and inaccessible. Moreover, it permits inferences that would be unsafe in a single "unconnected" piece of research. The investigator is protected against reckless inferences sometimes associated with the presence of transient or accidental circumstances that impinge on respondents. Combined findings transcend particularities. The secondary analysis of a large data base and the associated safeguards against unwarranted inferences also contribute to theory which must remain rooted in the "evidence".

Motivational Orientations

The motivational orientation research tradition has two branches. The first encompasses studies that investigate "antecedents", variables associated with "reasons" which exert their effects prior to a participation act (usually enrollment). The second, a smaller branch, includes studies where the consequents are investigated--variables that follow an act of participation. Typical of the first branch are Morstain and Smart's (1974) study of relationships between age, sex and orientation scores and Boshier's (1977; 1980) attempts to investigate relationships between psychological antecedents and orientations. In the second branch would be Clark and Boshier's (1981) study of relationships between orientation scores and satisfaction with aspects of the adult education environment or Potvin's (1980) investigation of benefits and orientations. Nearly all orientation research is of the first type and treats E.P.S. factor or scale scores as variables "dependent" upon the effects of a variety of socio-demographic and psychological variables. In a typical study, E.P.S. factor or scale scores are associated with age, sex, marital status, occupation, previous participation in adult education and suchlike.

Motivational orientation data has been collected from Cree Indians, Ghanian farmers, American nurses, middle class New Zealanders, German soldiers, Inuit (Eskimo) trainers and others in studies that have investigated many hypotheses. But a persistent theme in motivational orientation research concerns the structure of "motives" for participation and their relationship to variables in the life cycle (age, sex, marital status, number of children) and socio-economic domain (occupation, income). In addition, researchers have shown a marked interest in relationships between E.P.S. scores and "previous participation" (in adult education) and enrolling in credit (or non-credit) classes. This emphasis partly stems from the work of early participation researchers (e.g., Johnstone and Rivera, 1965; London, et al., 1963) and the widespread belief that reasons for participation vary as a function of a

participant's place in the life cycle and society. Thus, theoretical formulations designed to explain participant motivation usually ascribe significance to socio-economic and life cycle variables. This can be seen in the work of Miller (1967), Boshier (1980), and Knox and Videbeck (1963).

Thus far, E.P.S. researchers have either relied on the scoring key derived from Boshier's (1977) factorings or generated their own. Reliability and validity data have been available but when researchers try to compare their results the task becomes difficult. Most researchers calculate relationships between E.P.S. scores and "marker" variables like age and sex. But even simple calculations are done in a variety of ways and, furthermore, many are buried in university theses and thus unmicrofilmed obscurity. Thus there has been a longstanding need to produce E.P.S. norms and scoring keys derived from general and specific factorings of the scale. In addition, ambiguity concerning the veracity of Houle's (1961) typology creates a situation which, after twenty years, deserves resolution. A large-scale secondary analysis of E.P.S. data should resolve many of these matters. Thus, this was the first part of a larger study and designed to:

i. Create a large-scale master file of E.P.S. data that would be available for subsequent analysis.
ii. Investigate the structural foundations of motivational orientations as measured by the E.P.S.
iii. Reveal relationships between E.P.S. scores and life cycle and socio-economic variables.
iv. Produce norms and scoring keys for the E.P.S. thus rendering the many small and isolated factor analytic investigations unnecessary.

METHOD

Data Collection: Letters were dispatched to known E.P.S. users inviting them to contribute their data to a secondary analysis. Researchers were asked to send coding schedules and card decks, tapes or coding forms containing E.P.S. and any socio-demographic data collected. These data were read into computer files and then transformed into a common format. Most "contributing" researchers had collected data on a variety of socio-demographic variables such as sex, age, marital status, number of children, education, income, occupation, previous participation (in adult education) and whether courses were for credit (or non-credit).

Data Transformation: In all, 49 E.P.S. items were arrayed in the masterfile. This represents each of the 48 items of the first version (which encompasses 40 of the second version) plus one item that appeared in the 40 but not the 48 item form. The 48 item E.P.S. had items cast on a 9 point scale. The 40 item version has items on a 4 point scale. The two scaling formats look like this:

		Very much influence		Much influence		Moderate influence		Little influence		Very little influence
(48)	To make new friends	9	*	7	*	5	*	3	*	1
(40)	To make new friends	Much Influence			Moderate Influence			Little Influence		No Influence

The scale lengths of the nine point 48 item form, the four point 40 item form, the five point form used by Mergener and the ten point form used by O'Connor were all equalized to a four point format by recoding item responses into the four point format. A frequency count of item responses to the 48 item showed that most respondents used the "anchored" positions on the scale (much, moderate, little, etc.); relatively few people used the intermediate (*) positions. The recoded 48 item data and responses to the 40 item form were subsequently used to produce a correlation matrix for factor analysis. Both the 48 and 40 item forms had scale poles that were systematically alternated right to left to minimize

response bias. Some writers had coded data so that "No influence" was 1 and "much influence" was 4; others had used a 0 - 3 scale. Some coded all "left-sided" responses 1 and all right-side responses 4 and then used a recode card. For this study, recode statements were used to convert the codes into common categories where 1 always denoted "no influence" and 4 denoted "much influence". This process was undertaken with great care. Where information was provided by contributing researchers, it was checked by comparing item scores with responses on one or more of their E.P.S. forms. Moreover, a correlation matrix showing relationships between items known to have high loadings within each factor was generated for each file. The presence of positive signs confirmed that non-polarized (left to right-side) codes had been successfully transformed into polarized (1 for "no influence"; 4 for "much influence") codes.

Data on nine life cycle and socio-demographic variables were also extracted from each contributing file and arrayed into a common format in the master file. The contributing researcher had coded the variables in a variety of ways, so it was necessary to develop categories with sufficient generality to cover the various codes used by contributors. Data from contributors were recoded and regrouped to fit these categories: Sex: Men = 1, Women = 2; Marital Status: Single = 1, Married/cohabiting = 2; Occupation: Not employed = 0, Student = 1, Housewife = 2, Unskilled worker = 3, Skilled worker = 4, Clerical/sales personnel = 5, Managers/administrators = 6, Professional/Technical personnel = 7; Education: Primary (Elementary) only = 1, Secondary = 2, Vocational/Technical = 3, College/University = 4, University Degree = 5, Graduate School Attendance = 6; Course Credit: Not for credit = 1, For Credit = 2; Previous Participation in Adult Education: Previous participation = 1, No Previous Participation = 2. SPSS recode statements were written for each contributing file. "Original" and recoded data were then compared by hand. When the E.P.S. and socio-demographic data were finally arrayed into a common format, the researchers visually scanned each line and deleted those where there was clear evidence of frivolous or nonsensical responses (such as a row of 1's or blanks). Thus, in this study, the number of cases will be slightly lower than in "original" reports.

RESULTS

Contributors

In all, 48 files were used to constitute a masterfile of 12,191 cases. Of these, 36.85 per cent had completed the 48 and 58.05 per cent the 40 item version. The remainder completed a 35 item form designed for older adults or a version that included E.P.S. and other items specific to the contributing researchers' purposes. Table 1 shows the number of cases in each contributing file, the form of the E.P.S. used, the nature of the accompanying life cycle and socio-economic data, the name of the contributor, a brief description of the respondents, their location, and the date the data was collected. The mean date for collecting data was 1978; the first was collected by Boshier in 1969; the most recent was obtained in 1981. Most data were from Canada and the U.S.A. but some files came from Ghana, Singapore, Malaysia, Hong Kong and the Canadian Arctic. The population consisted of nurses, farmers, religious people, and adult education participants of all types.

Factor Structure

As a first step directed toward the production of a generalized scoring key, all E.P.S. data were factor analysed and rotated. In the initial stages various solutions were employed; the most satisfactory involved á principal components analysis with orthogonal rotation.

The first unrestricted factoring suggested that a five or six factor solution would produce the most psychologically and psychometically defensible solution. Seven, six, five, four and three factor solutions were also examined. The hypothesis underlying a three factor solution derived from Houle's (1961) typology. These results resolve some ambiguity but, because of space constraints, are not reported here.

The six factor solution chosen is shown in Table 2. The Social Contact factor emerged first and accounted for the greatest amount of variance. In an effort to assist E.P.S. users, some "old" factors (like Escape/Stimulation) have been given new names; others retain their former label. Social Contact contained nine variables with loadings that ranged from .42 to .76 and accounted for 23.25 per cent of the variance; Social Stimulation (the old Escape/Stimulation factor) contained nine items with loadings ranging from .49 to .65 and accounted for 18.92 per cent of the variance; Professional Advancement contained eight variables with loadings from .44 and .79 and accounted for 17.88 per cent of the variance; Social Service (the old Social Welfare) contained five variables with loadings from .54 to .75 and accounted for 14.33 per cent of the variance; External Expectations contained five variables with loadings from .46 to .74 and accounted for 13.76 per cent of the variance; Cognitive Interest contained four items with loadings ranging from .72 to .81 and accounted for 11.83 per cent of the variance. Cumulatively, the six factors accounted for 57.40 per cent of the total variance before rotation.

As the second step in the analysis, E.P.S. scale scores were compiled, their items intercorrelated and alpha coefficients produced. All the alpha coefficients were high; each factor was thus internally consistent. Thus, the eight items constituting Social Contact had an overall alpha of .88; Social Stimulation yielded an alpha of .86; Professional Advancement .82; Community Service .84; External Expectations .80; Cognitive Interest .80. Total scores were divided by the number of items in the factor to yield a scale score that could range from one to four. For the 12,191 cases the mean scale scores were as follows: Social Contact 1.89 (S.D. = .77); Social Stimulation 1.92 (S.D. = .75); Professional Advancement 2.27 (S.D. = .83); Community Service 2.17 (S.D. = .86); External Expectations 1.71 (S.D =.78) and Cognitive Interest 3.02 (S.D. = .82).

E.P.S. Scores, Socio-Economic and Life Cycle Variables

Each of the 12,191 participants had completed the E.P.S. but not every contributing researcher had collected data on each of the nine socio-economic and life cycle variables studied herein. There was complete data on the sex of 11,567 participants--67.56 per cent were women; 32.44 per cent were men. The mean age of the 11,684 participants on whom this data was available was 35.34 years (S.D.=14.70 years). Of the 8,285 people for whom "marital status" data was available, 41.88 per cent were single, divorced or separated; the remainder were married or cohabiting. The 6,692 participants who provided data on family size had an average of 1.59 children (S.D. = 1.84). Education data was available for 8,405 participants. Just over 22 per cent had a university degree; 41.18 per cent had secondary schooling only. Income data was available on 4,468 participants (incomes for the Ghanians was treated as "missing" since Cedi exchange rates for 1976-77 were not available). Remember that E.P.S. data was collected between 1969 and 1981; the mean household income was $17,203 (S.D. = $11,056). The mean occupation code for the 9,392 participants who provided this data suggested an employment level between "skilled" and "clerical/sales" worker). Missing data were disregarded when calculating the frequencies, correlation coefficients and F values reported below.

Table 3 shows relationships between E.P.S., life cycle and socio-economic variables. A one-way ANOVA was used to test relationships between E.P.S. scores and the polychotomous nominal variables while E.P.S. scores and interval variables were simply correlated. Most variables in Table 3 were associated with E.P.S. scores but great care must be employed when interpreting significance levels attained with such large n's. For example, age was significantly correlated to Factor I ($r = -.15$) but only accounts for 2.25 per cent of the variance in Social Contact.

Space precludes extensive discussion of these results but, in brief, men were significantly more inclined than women to be enrolled for social contact, social stimulation, professional advancement, community service, external expectations reasons; women were slightly more inclined to be enrolled for cognitive interest reasons than were men. Single participants had slightly but significantly higher

scores than married/cohabitating participants on all E.P.S. factors except Cognitive Interest. But because marital status was slightly correlated with age ($r = -.08$, $p < .0001$) this result must be treated with caution. Age was a significant predictor of variance in all the E.P.S. scores. Younger participants were more inclined than older respondents to be enrolled for reasons of social contact, social stimulation, professional advancement, community service and external expectations. But older adults, who presumably have a greater margin than younger people, were more inclined to be enrolled for cognitive interest--learning for its own sake. Conventional wisdom has held that lonely older adults are advised to and actually seek social stimulation and contact through adult education. These results refute that claim and will stimulate some critical examination of relationships between E.P.S. scores and the interactive effects of the life cycle variables. Finally, participants with no or few children were more inclined to be enrolled for social contact, social stimulation and professional advancement. The relationships between "number of children" and the last three E.P.S. scores, although statistically significant on two variables, were weak.

Education, occupation and income--the socio-economic variables--were all significantly associated with E.P.S. scores but none accounted for large amounts of variance. People of lower socio-economic status obtained higher scores on all E.P.S. scales except for Cognitive Interest, where the relationship was non-significant. Thus, participants with "low" education, occupational status, and income were significantly more inclined to be enrolled for reasons of social contact, social stimulation, community service and external expectations. Persons with "low" education were also more inclined to be enrolled for professional advancement. Participants with "high" occupational status were more inclined to be enrolled for Cognitive Interest than low status persons. There were no significant relationships between Cognitive Interest, and education and income.

"Previous participation" was most closely associated with Professional Advancement. Previous participants were less inclined to be enrolled for social stimulation but more likely to be in classes for professional advancement, community service and external expectations than were people who had not previously participated. The 5,249 participants enrolled for credit were more inclined to be enrolled for social contact, social stimulation, professional advancement, community service and external expectations than those enrolled on a non-credit basis. The construct validity of Professional Advancement is enhanced because Cognitive Interest was negatively associated with credit ($r = -.17$, $p < .0001$).

All E.P.S. scores were variously related to the life cycle and socio-economic variables employed. This result provides general support for the notion that motivational orientations are related to socio-economic and other attributes of the participant's "life space" (Lewin, 1936). But despite the statistical significance of the relationships, no life cycle or socio-economic variable accounts for large amounts of variance in E.P.S. scores. It was thus concluded that the E.P.S. measures are reasonably independent of "marker" variables that often overlap with and thus confound psychological variables. Using scoring keys generated from this study, program planners can thus measure motivational orientations during their needs analyses and be reasonably confident that E.P.S. scores are "pure"--not overly confounded by age, income and suchlike. E.P.S. factors have integrity; they are not redundant manifestations of some other variable(s). Now the masterfile is available it will be possible to predict orientation scores from interactions of life cycle and socio-economic variables and to separate joint from "partial" effects. Next, factor solutions will be generated for groups defined by sex, age, occupation and educational level. This step will create scoring keys and norms to supplement the solution for the population at large derived from the present analysis.

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AUTHOR NAME	N	FORM	SOCIO-DEMOGRAPHIC ITEMS SX	AG	MS	#C	ED	IN	OC	AE	CS	DESCRIPTION	LOCATION			DATE OF DATA COLLECTION
K. OPARE	50	40	Y	Y	Y	Y	Y	Y	Y	N	N	GHANA TEACHERS' SUMMER COURSE	CAPE COAST		GHANA	DEC. 1977
U. HAAG	235	40	Y	Y	Y	N	Y	Y	Y	Y	Y	HIGH SCHOOL ADULT NIGHT CLASSES	RICHMOND,	B. C.	CANADA	SEPT. 1975
U. HAAG	42	40	Y	Y	Y	N	Y	Y	Y	Y	Y	TECHNOLOGY INSTITUTE TRAINEES	BURNABY,	B. C.	CANADA	APR. 1975
U. HAAG	42	40	Y	Y	Y	N	Y	Y	Y	Y	Y	TECHNOLOGY INSTITUTE TRAINEES	BURNABY,	B. C.	CANADA	APR. 1975
J. COLLINS	12	40	N	N	N	N	N	N	N	N	N	PROFESSIONALS IN ADULT EDUCATION	VANCOUVER,	B. C.	CANADA	FALL, 1977
W. MILLS	55	40	Y	Y	Y	Y	Y	N	Y	Y	Y	NURSES IN DISTANCE EDUCATION PGMS.	RED DEER,	ALTA.	CANADA	JAN. 1979
W. MILLS	78	40	Y	Y	Y	Y	Y	N	Y	Y	Y	NURSES IN UNIVERSITY C. E. PGMS.	EDMONTON,	ALTA.	CANADA	JAN. 1979
B. GOODNOW	989	40	Y	Y	N	N	N	N	Y	N	Y	ADULTS IN PART TIME COMM. COLLEGE	GLEN ELLYN	ILL.	USA	JUNE, 1979
R. BOSHIER	58	40	Y	Y	Y	Y	Y	Y	Y	Y	N	ADULTS IN UNIVERSITY CONT. EDUC.	VANCOUVER,	B. C.	CANADA	MARCH 1979
R. BOSHIER	140	40	Y	Y	Y	Y	Y	Y	Y	Y	N	VOCATIONAL INSTITUTE TRAINEES	VANCOUVER,	B. C.	CANADA	JUNE, 1979
E. HOPKINSON	27	40	Y	Y	Y	Y	Y	Y	Y	Y	N	ADULT IN GRADE 12 COMPLETION PGMS	VANCOUVER,	B. C.	CANADA	APRIL 1979
K. FOSTER	114	40	Y	Y	Y	Y	Y	Y	Y	Y	N	UNIVERSITY CONT. EDUC. FOR SENIORS	VANCOUVER,	B. C.	CANADA	JULY, 1979
R. BOSHIER	28	40	Y	Y	Y	Y	Y	Y	Y	Y	N	GRAD. STUDENTS IN UNIV. ADULT EDUC	VANCOUVER,	B. C.	CANADA	APRIL 1979
G. CLARKE	383	40	Y	Y	Y	N	Y	Y	Y	Y	N	ADULT NIGHT SCHOOL PARTICIPANTS	WHITE ROCK	B. C.	CANADA	SEPT. 1979
B. BLAKELY	133	40	Y	Y	Y	Y	Y	Y	Y	Y	Y	MULTI-CAMPUS CONTINUING ED. ADULTS	BURNABY,	B. C.	CANADA	FALL, 1978
D. SHEWAN	55	40	Y	Y	N	N	N	N	Y	N	N	QUEBEC CEGEP ENROLEES	MONTREAL,	P. Q.	CANADA	JULY, 1977
R. DENNEY	1402	40	Y	Y	Y	Y	Y	N	Y	Y	N	ADULTS IN RECREATION & CEU PGMS	INDIANAPLS	IND.	USA	SEPT. 1976
M. GOVERNANTI	596	40	Y	Y	Y	Y	Y	Y	Y	N	Y	ADULTS AT COMMUNITY COLLEGES	JAMESTOWN	N. Y.	USA	JULY, 1980
K. FOSTER	13	40	Y	Y	N	N	N	N	Y	N	Y	VOCATIONAL INSTRUCTORS	FT. SMITH	N.W.T.	CANADA	JULY, 1980
J. FARLEY	105	40	Y	Y	Y	Y	Y	N	Y	Y	N	PRACTICING STAFF NURSES	MANCHESTER	N. H.	USA	FEB. 1979
P. MCKENNA	146	40	Y	Y	N	Y	N	N	N	N	N	ADULTS IN TRAINING PROGRAMS	DEPT OF ED	CONN	USA	FALL, 1980
D. WILSON	77	40	Y	Y	Y	Y	Y	N	Y	Y	Y	RURAL ADULTS IN LIFE-COPING SKILLS	ORLAND,	MAINE	USA	FEB. 1978
J. HAWES	55	40	Y	Y	Y	N	Y	Y	Y	Y	Y	DUKE UNIVERSITY ADULT PARTICIPANTS	DURHAM,	N. C.	USA	FALL, 1978
J. HAWES	414	40	Y	Y	Y	N	Y	Y	Y	Y	Y	ADULTS IN COMMUNITY EDUCATION	4 COUNTIES	N. C.	USA	FALL, 1978
J. HAWES	339	40	Y	Y	Y	N	Y	Y	Y	Y	Y	ADULTS IN TECHNICAL INSTITUTES	DURHAM,	N. C.	USA	FALL, 1978
J. HAWES	203	40	Y	Y	Y	N	Y	Y	Y	Y	Y	ADULT UNIVERSITY STUDENTS, NCCU	DURHAM,	N. C.	USA	FALL, 1978
M. CESCHISMITH	622	40	Y	Y	N	N	N	N	Y	N	Y	DEGREE SEEKING ADULTS, PART-TIME	GUELPH,	ONT.	CANADA	FALL, 1980
R. BOSHIER	66	40	Y	Y	N	N	Y	N	Y	N	Y	ADULTS IN A TRAINER TRAINING PGM.	SINGAPORE		SINGAPORE	DEC. 1981
R. BOSHIER	22	40	Y	Y	N	N	Y	N	Y	N	Y	GOVERNMENT AND HEALTH TRAINERS	KUALA LUMPUR		MALAYSIA	DEC. 1981
R BOSHIER	20	40	Y	Y	N	N	Y	N	Y	N	Y	ADULTS IN A TRAINER TRAINING PGM.	HONG KONG		HONG KONG	DEC. 1981
D. ZIBRIK	73	40	N	N	N	N	N	N	N	N	N	ADULTS IN COMM. NUTRITION PGMS.	VANCOUVER	B. C.	CANADA	FEB. 1980
R. BOSHIER	19	40	N	N	N	N	N	N	N	N	N	UNIV. C. E. PGM. ON VTR (TEST)	VANCOUVER	B. C.	CANADA	MARCH 1978
R. BOSHIER	19	40	N	N	N	N	N	N	N	N	N	VTR TRAINING (1 WEEK RETEST)	VANCOUVER	B. C.	CANADA	MARCH 1978
SUBTOTAL	6,019	RESPONDENTS TO THE REVISED, STANDARD 40 ITEM EPS FORM WITH A 4 POINT RESPONSE SCALE.														
G. RIDDELL	84	35	Y	Y	Y	N	Y	N	Y	N	N	SENIOR CITIZEN RETIREES	VANCOUVER,	B. C.	CANADA	FEB. 1976
M. SCANLIN	207	35	Y	Y	Y	Y	Y	Y	N	Y	N	ADULTS IN RELIGIONS EDUCATION	PHILADELPHIA	PA	USA	AUG. 1981
B. SPROUSE	329	35	Y	Y	Y	Y	Y	Y	Y	Y	Y	OLDER ADULTS (SEG/INTEG) IN C.E.	MADISON,	WISC	USA	SEPT. 1980
SUBTOTAL	620	RESPONDENTS TO A 35 ITEM EPS FORM, MODIFIED FOR OLDER, RETIRED ADULTS, 4 POINT RESPONSE SCALE.														
G. BAKER	42	48	N	N	N	N	N	N	N	N	Y	PILOT FOR ADULT HOBBY LEARNERS	SURREY,	B. C.	CANADA	JAN. 1975
G. BAKER	684	48	Y	Y	Y	Y	Y	Y	Y	Y	Y	ADULT NIGHT SCHOOL HOBBY LEARNERS	SURREY,	B. C.	CANADA	APRIL 1975
R. BOSHIER	76	48	Y	Y	Y	N	Y	Y	Y	Y	Y	ADULT NIGHT SCHOOL PARTICIPANTS	RICHMOND,	B. C.	CANADA	FALL, 1975
I. ZACK	122	48	Y	Y	Y	N	Y	N	Y	Y	Y	MULTI-ETHNIC ADULTS IN NIGHT SCHOOL	VANCOUVER,	B. C.	CANADA	FALL, 1975
MORSTAIN-SMART	630	48	Y	Y	N	N	Y	Y	Y	Y	Y	ADULT PART-TIME COLLEGE ENROLLEES	GLASSBORO,	N. .	USA	FALL, 1972
M WOLFGANG	324	48	Y	Y	Y	Y	Y	Y	Y	N	Y	SENIOR ADULT DEGREE SEEKERS	COLUMBUS,	OHIO	USA	FALL, 1978
V. GORDON	256	48	Y	Y	Y	Y	N	N	Y	N	Y	FRESHMAN UNIVERSITY STUDENTS	COLUMBUS,	OHIO	USA	FEB. 1981
R. BOSHIER	129	48	N	N	N	N	N	N	N	N	N	UNIV. EXTENSION PSYCHOLOGY PGMS.	WELLINGTON,		NEW ZLND	MARCH 1969
SUBTOTAL	2,498	RESPONDENTS TO THE UNMODIFIED, ORIGINAL 48 ITEM EPS FORM WITH A 9 POINT RESPONSE SCALE.														
M MERGENER	248	43	Y	Y	N	N	Y	N	Y	Y	Y	TRI-STATE PHARMACISTS IN CONT EDUC	IND-IOWA-WISC.		USA	JAN. 1978
M MERGENER	198	43	Y	Y	N	N	Y	N	Y	Y	Y	2 YEAR PHARMACISTS FOLLOW-UP	IND-IOWA-WISC.		USA	MARCH 1980
SUBTOTAL	446	RESPONDENTS TO A 40 (+3) ITEM MODIFIED FORM WITH A 5 POINT RESPONSE SCALE.														
A. O'CONNOR	1152	56	Y	Y	Y	Y	Y	N	Y	Y	Y	NURSES IN (AJN) SELF STUDY, C. E.	PITTSBURGH,	PA	USA	FEB. 1979
A. O'CONNOR	843	56	Y	Y	Y	Y	Y	N	Y	Y	N	MULTI-STATE NURSES IN UNIV. C. E.	NEW YORK CITY	NY	USA	JUNE, 1978
SUBTOTAL	1,995	RESPONDENTS TO A MODIFIED 48 (+8) ITEM EPS FORM WITH A 10 POINT RESPONSE SCALE.														
TOTAL CASES	12,191	RESPONDING TO 39 (+1) COMMON ITEMS, COLLAPSED TO A 4 POINT RESPONSE FORMAT.														

KEY TO ABBREVIATIONS: DATA FOR THE FOLLOWING VARIABLES: (Y)AVAILABLE
(N)NOT AVAILABLE.

SX = SEX (1=MALE, 2=FEMALE)
AG = AGE (RAW DATA OR CATEGORY MIDPOINT)
MS = MARITAL STATUS (1=SINGLE, DIVORCED OR SEPARATED, 2IED OR COHABITING)
#C = NUMBER OF CHILDREN (RAW NUMBER)
ED = EDUCATION (NUMBER OF YEARS OF FORMAL SCHOOLIN
IN = INCOME (RAW DATA OR CATEGORY MIDPOINT)
OC = OCCUPATION (1=NOT WORKING, 2=PART TIME, 3=FULL
AE = PREVIOUS EXPERIENCE IN ADULT EDUCATION PROGRAMS (RAW NUOF PROGRAMS)
CS = ENROLLED AS A CERTIFICATE SEEKING LEARMER? . . . (1=NO,)
(DEGREE, DIPLOMA, CREDENTIAL, CREDIT, ETC.)

TABLE 2 SCALE SCORES AND THEIR SOCIO-DEMOGRAPHIC CORRELATES FOR SIX EPS SCALES

Socio-Demographic Characteristics		Educational Participation Scale Scores (Stat = Statistical Relation; PVE = Percentage of Variance Explained)											
		Social Contact		Social Stimulation		Professional Advancement		Community Service		External Expectations		Cognitive Interest	
Variables	# Reporting	Stat	PVE %	Stat	PVE %	Stat	PVE %	Stat	PVE %	Stat	PVE %	Stat	PVE %
CHARACTERISTICS OF SIX E P S SCALES	12,191												
Scale Means		1 89		1 93		2 28		2 18		1 72		3 03	
Std Deviations		78		75		83		86		78		83	
Range (Min, Max)		1-4		1-4		1-4		1-4		1-4			
Reliabilities (Alpha)		88		86		82		84		80		80	
SOCIO-DEMOGRAPHIC CHARACTERISTICS													
Sex	11,567	- 10	0 96%	- 03	0 06%	- 04	0 08%	- 04	0 09	- 09	1 01%	11	2 25%
Male	30 44%	2 01		1 95		2 30		2 19		1 82		2 85	
Female	69 56%	1 84		1 91		2 25		2 15		1 65		3 11	
Age	11,684	- 15	2 25	- 18	3 24	- 22	4 84	- 12	1 44	- 18	3 24	16	2 56
Mean Age (Yrs)	35 34												
Marital Status	8,385	- 15	2 29	- 10	1 04	- 08	0 78	- 08	0 63	- 07	0 60	- 01	0 00
Single	58 77%	1 89		1 88		2 27		2 13		1 58		3 12	
Married	41 23%	1 69		1 75		2 12		2 00		1 49		3 12	
Number of Children	6,692	- 05	0 25	- 05	0 25	- 07	0 49	- 02	0 04	- 03	0 09	- 01	0 01
Mean Number	1 60												
Education	8,405 (eta)	14	1 89	12	1 47	15	2 21	09	0 84	12	1 55	07	0 47
Primary	2 81%	2 06		2 05		2 02		2 09		1 53		3 13	
Secondary	41 18%	1 76		1 82		2 15		2 01		1 45		3 10	
Voc-Tech	18 42%	1 08		1 72		2 14		2 01		1 48		3 17	
Coll-Univ	8 67%	1 83		1 79		2 40		2 16		1 70		2 96	
Univ Deg	22 13%	1 63		1 71		2 21		2 04		1 58		3 12	
Grad School	10 40%	1 63		1 67		1 86		1 83		1 39		3 18	
Income (x$1000)	4,468	- 11	1 21	- 09	0 81	- 14	1 96	- 12	1 44	- 09	- 81	- 01	0 00
Mean Income	$17,204												
Occupation	9,392 (eta)	26	6 51	26	6 53	23	5 34	18	5 34	24	5 53	17	3 15
Not Empld	9 46%	2 18		2 22		2 45		2 56		2 19		2 90	
Student	2 86%	1 84		1 69		2 52		2 17		1 54		2 77	
Housewife	7 98%	1 92		2 13		1 88		1 97		1 38		3 22	
Unskilled/Retrd	3 31%	1 91		1 85		2 09		1 93		1 54		2 94	
Skilled	10 85%	2 09		2 09		2 31		2 19		1 78		2 86	
Clerical-Sales	17 59%	2 16		2 20		2 20		2 25		1 90		2 93	
Mngr-Admin	10 66%	1 89		1 88		2 20		2 01		1 62		2 95	
Tech-Educ-Prof	37 29%	1 67		1 76		2 49		2 26		1 79		3 19	
Previous Ad Ed Participation	4,328	- 01	0 04	- 03	0 24	20	3 93	14	1 80	04	0 73	01	0 04
No Participation	68 32%	1 82		1 90		1 89		1 80		1 43		3 05	
Participation	31 68%	1 80		1 83		2 28		2 04		1 54		3 02	
Credit for Course	9,085	09	0 70	08	0 66	37	13 63	19	3 60	24	5 91	17	2 79
Non-Credit	57 79%	1 84		1 90		2 00		2 06		1 58		3 21	
Credit	42 21%	1 99		2 03		2 61		2 40		1 98		2 93	
EPS Form Used	12,191 (eta)	27	7 25	22	4 69	23	5 48	15	2 32	21	4 46	23	5 60
40 Item 4 Pt	54 40%	1 98		2 00		2 21		2 08		1 74		2 86	
35 Item 4 Pt	5 09%	2 04		1 78		1 61		2 14		1 42		3 12	
48 Item 9 Pt	20 49%	2 00		2 02		2 43		2 32		1 66		3 14	
43 Item 5 Pt(M)	3 66%	1 89		2 10		2 56		2 67		2 47		3 33	
48 Item 10 Pt(O)	16 36%	1 42		1 58		2 45		2 19		1 64		3 33	
EPS Scale Intercorrelations		SC		SS		PA		CS		EE		CI	
Social Contact		--											
Social Stimulation		71		--									
Professional Advancement		23		16		--							
Community Service		59		46		48		--					
External Expectations		56		51		41		48		--			
Cognitive Interest		03		13		- 02		15		- 14		--	

THE SELF, EGO AND THE ARCHETYPES: THE STUDY OF THE SMALL GROUP FROM THE PERSPECTIVE OF ANALYTICAL PSYCHOLOGY

Robert D. Boyd
University of Wisconsin-Madison*

INTRODUCTION

This paper presents a way of looking at the events in a small group from the perspective of Analytical psychology. Analytical psychology designates a body of theory and research containing the works of Esther Harding, Jolande Jacobi, Erick Neumann and Edward Edinger and many others who have pursued the powerfully insightful works of Carl G. Jung. I have employed the ideas and formulations of Analytical psychology to examine the flow of events in the life of small groups of which I have been a member. I will discuss the methodology of analysis and my method of conducting small groups which has incorporated the ideas of Analytical psychology into my Matrix theory.

Before I take up the subject of this paper, I want to make clear the place of my contributions in the stream of investigations that compose the literature on small groups. To those who know of my work it appears to be at odds with the theories advanced by certain prominent authorities; however, this is not an entirely accurate view. I raise this point because frequently new contributions in the social sciences are advertised as outdating and replacing that which has gone before. I cannot see how this can be proposed in the case of those thoughtful and carefully conducted investigations on small groups. At this stage of our knowledge, we are very much dependent on the serious works of many investigators who have taken a variety of approaches in their earnest attempts to develop scientific explanations of the dynamics in the life of a small group. To be specific, there is abundant evidence to support the position that what happens in small groups can be explained on various levels. Beginning with the pioneering work of R.F. Bales (1950) we have long recognized the instrumental and expressive dimensions of behaviors in small groups. Behaviors are readily observable and their classification requires a minimum degree of inference in the Interaction Process Analysis framework. Bale's work stands in sharp contrast, at first appearance, to the works of Bion (1959), Thelen (Stock, 1958) and Slater (1966). They conceptualize the events in small groups in terms of group cultures, transference and emotionality. It appears to be a quantum leap to describe a group on the one hand as dealing with the problems of evaluation, as does Bales, and on the other hand, as conducting a totem feast which is the conceptualization Slater employs to explain a phase of development in a group. The problem of seeing these two explanations as incompatible exists because we are intent, apparently, in trying to see life on simple terms. On the contrary, we must start from the premise that human existence is complex and complicated and our explanations must reflect that premise as an initial given. As often as I wanted to make things easier for myself, by trying to use the principle of parsimony, my observations would not allow me to escape to a simple but imaginary world. The serious works of a variety of investigators repeatedly demonstrate the complex and complicated

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* 6220 Raymond Road, Madison, Wisconsin 53711

nature of human existence. Members do work on evaluation issues in order to move the tasks of their group forward. Groups do have basic orientations which dictate acceptable and unacceptable modes of relating and of which the members are not consciously aware. The task before us is to accept the reality that human existence is operative at various levels and for various ends, and try to develop conceptual frameworks which through complementation may provide us with a matrix of explanations. My Matrix framework is an initial attempt in that direction.

CONCEPTUAL FRAMEWORK AND INSTRUCTIONAL METHODOLOGY

I offer a brief explanation of my Matrix framework here, because it was in my attempts to use it as a guide in both my instructional and research work with small groups. The instructional and research aspects of my work both lead me to the methodology I used in working with small groups and very directly to Analytical psychology. These developments can be seen as having their start in my Matrix framework.

I view the small group as being composed of three systems, namely, the social, personality and cultural systems. The social system comes into existence when the group is formed and it ceases to exist when the group terminates or disbands. The personality system includes the individuals who form the membership of the group, each one of whom is him/herself a personality system. The cultural system is the trans-system dimension which bridges the cultural issues the small group works on and the cultural issues the society is involved with and within which the group exists. Each of the three systems has to deal with three primary tasks. First, each system must work out the nature of its identity which involves such tasks as identifying and establishing boundaries and resolving critical developmental stages. Second, each system must work through modes of relating. These modes of relating are defined within emotionalities on an approach-avoidance continuum. Finally, each system must handle reality-adaptive demands that their very existence confronts them with. The group-as-a-whole can be seen as a larger system composed of these three subsystems.

The instructional role of a leader in a training group is to give interpretations on what is happening in the group. I accept this role of the leader-instructor but in doing so I faced a fundamental problem. How was I to share my perceptions of what was taking place in the group and do so within the framework of the Matrix framework? The dilemma was to share your observation which generally focused on one task or system and yet not restrict the group so that the members would find it difficult to use your observation and move among the tasks and deal at the three system levels as their awarenesses and understandings progressed. My solution was to speak to the group as a system and focus my observations on the tasks. Since I assumed that all three tasks were being attended to at various degrees of involvement, my observations would have to be given in a structure that would not preclude the group from using my observations, if it so chose, as resource material to help it to work on any one of the three primary tasks. For example, my observations should not speak directly to boundary conflicts. I do not know what led me to using metaphors but my initial use of them immediately demonstrated the freedom metaphors gave the group to focus the observation on the problem the group was encountering or to use it to avoid dealing with the problem. In either case

the group had a wide set of options to select from because my observations given as metaphors did not dictate a defined and specific agenda. Direct interventions which are used in Sensitivity groups, T-groups and the Tavistock approach make it difficult for the group to disregard them and therefore such interventions direct the group even when the group's behavior is expressed in open or passive resistance. Metaphors, if carefully chosen, provide a range of reasonable interpretations. If the momentum of the group is towards developing understandings and accepting the struggles of growth, then the metaphor is carefully and thoughtfully reconstructed with the members' own observations, feelings, perceptions, intuitions and thoughts. If the group is not ready to handle the problems it faces, then the metaphor is used either as a plaything or is ingored often in the same manner that a young person disregards the words of a parent. In all cases, in using a metaphor, the direction of its content is determined by group members.

The following is an example of an observation given as a metaphor. "I get a sense that I am watching a family sitting around the living room. The siblings had all come home to spend the holidays but they found their mother ill. She is upstairs in her room now very ill. Father is not home; he is out on one of his lecture tours." At another point in time and with a set of other conditions occurring in a group, I gave the following metaphor. "As I listen to the group an image comes to mind. When Christ was on the cross he cried out to God, 'Father why have you forsaken me?'"

Greek mythology is rich in highlighting critical dilemmas in human existence. I tried to make use of this material but I found that unless I told the story I could not use the myth because the students had little or no knowledge of Greek mythology. The exploration of using metaphors, that is symbolic language as a means to get in touch with intra and interpersonal dynamics, quickly alerted me to another level of group life I had been aware of but not specifically addressed in my work. I had been very involved in helping group members through their membership in the group to understand how their personal unconscious was collectively operating in the life of the group. For example, I share my observations through metaphors of how members who had repressed their negative feelings towards their fathers were now apparently unconsciously directing these feelings onto me. The group, as a whole, uses such transference to deal with the immediate issues of authority and autonomy. The group makes use of the individual member who has the transference problem as a central person to work through the issues of authority and autonomy as in our example above. In large part this is what Bion had in mind when he observed that a group in a basic assumption culture rally around the "sick" member.

RESEARCH METHODOLOGY AND FINDING

I now began to see the existence of a recapitulation of the growth of the conscious from the unconscious. This was taking place as a collective phenomenon, that is, an event the members develop mutually and spontaneously by entering into and sharing. The life of a group is like a play where the story-line is set by the evolution of our species but where the script evolves through the unique dialogues of the membership. In watching this play we can see the ego becoming increasingly aware of its existence, the ties it has to the self, the shadows that have directed the ego and the symbols that have structured its life. I am getting ahead of myself at this point so I will

return to where I became aware of the members working on the task of devloping ego consciousness.

My inquiry had its origin in an observation that was so obvious I could not have missed. At the second lab session of a course on small groups, a member remarked shortly after the session had begun, "I feel like a fish swimming in the ocean." His message could be taken, as he may have intended it at one level of meaning, "I'm lost--I don't know where we are going." To stay with his metaphor, he was at sea. I saw another level of meaning in his statement. My ego consciousness is engulfed in a sea of unconsciousness. "I am unable to differentiate what I know from what I am a part of but do not know."

This observation and my thoughts about it focused my attention to determine whether this was an isolated and idiosyncratic phenomenon. Several members quickly related to the symbol of the fish in the ocean. When I directed my attention to this type of observation I was able to record many examples of symbolic and metaphoric language. The language also revealed relations one has with the environment that reveal information about the psyche. Here are some observations which followed the previous observation within the first fifteen minutes. "I do most of my thinking on the way home in my car." "It is difficult for me to be in a course where I am not surrounded by colleagues that I know and know where they come from." "We need to go to deeper levels--what's inside us." "We need to probe." "We are at the surface and we need to dig deeper." These and many others supported my growing awareness of the work the group was engaged in; the work of recapitulating the stages of ego growth beginning with the stage of uroboric unconsciousness.

At this point I interrupted my observations in order to do a more systematic study of Analytical psychology. I want to make the point, however, that a researcher should never get so far from his empirical observations that ideas cease to be in a discourse with observations. I am fully aware that ideas give meaning to what we perceive but what we perceive should not be the product of our ideas. That is fiction and not science.

Human consciousness exists first in the state of the round, what Neumann (1954) has called the uroboric stage. Here everything is connected to everything else and in that sense individual consciousness is tied to the events of the environment. At this stage spirits exist in trees and animals and man sees himself not as a soul apart from these other spirits but in a series of progressive stages, told and retold in myths of all cultures, the human ego separates from the self. The individual becomes aware of the separation (consciousness), and as an individual must cope with the demands that arise within him/her and those that confront him/her from without. When consciousness is directed within we become aware of what Analytical psychology calls shadows which are personal repressed content, our counter sexual self, the anima or the inner woman of man and the animus or the inner man of woman, and symbols which are the personal translations of archetypes which reside in the collective unconscious. I can not stop and explain these basic ideas of Analytical psychology but I can direct you to a comprehensive and coherent presentation of these ideas in a book by Jolande Jacobi (1973).

There was an event in a group I observed which involved a woman member

experiencing her animus. An examination of this event will illustrate both the explanatory power that Analytical psychology can add to our existing modes of explanation and the empirical manner in which this psychology can be applied to our observations.

A young woman turned to a young man in the group and said, "I guess I am a little angry at you for not doing what the rest of us did." Every member, except this young man, had shared various levels of personal agendas on why they had enrolled in the course. As the conversation between these two members progressed it became obvious that the young woman was indeed upset. We could accept her stated reason that he was just trying to be different and that annoyed her. In the exchange between them that followed her initial statement to him, she spoke about responsibility, making judgments, and sticking up for oneself. Not only the young man but several members who tried to relate to her points were unsuccessful. It appeared she was dealing with more than one agenda. As I listened, I noted possible agendas that she may have been speaking to.

1. Since Frank appeared to be aloof, which could be the way I appear by not directing the group, and also Frank appeared to be very cognitive, an attribute generally shared by professors, Frank might be used as a surrogate for me by Clare. In this way she might be getting at me in her mind or using Frank as a way of progressing to me.

2. There may be evidence of transference; Frank's behavior stirs up feelings that she has towards another man who Frank reminds her of.

3. She may be troubled by the image that women too often let things pass and especially those behaviors in which men are annoying. She does not subscribe to this position and will speak out when men's or women's behavior troubles her.

4. She may be working through her identity as a woman and part of this is determining her relations with men.

5. This last point raises the question: Why this man? Frank may represent for Clare a set of qualities which she sees in herself and she is uncertain whether she wants to foster or try to eliminate them.

This list does not exhaust possible explanations for Clare's behavior. We are not looking for the right one because all of the above explanations may be explanations for her behavior. The failure to help a person may be caused by operating on one reason and failing to appreciate that human behavior is overdetermined.

What caught my attention in Clare's exchanges with Frank was her moving between teasing and attacking. I observed this with other women in the group over the course of the group's life. There is evidence to propose that women use their encounters with men to come in contact with their personal animus. The difficulty I see in the explorations I have witnessed is that the explorations remain below the level of consciousness and therefore the ego is not given the opportunity to use these explorations to construct a psychic synthesis. What I have said here about women applies equally to men.

I have yet to speak of archetypes. An archetype is "pre-existent and immanent in the psyche." (Jacobi, p. 43). Symbols are used as a means to lay hold of archetypes. For example, we sense a mystery, a force that is life existentially, and we symbolize it as God, Mother Nature or a Life Force. These same symbols are found in small groups.

Several years ago I made extensive use of Bion's idea of basic assumption culture. In many ways the idea helped me to explain to the group what I was observing and it helped the members to get ahold of the complex events that they were involved in. It seemed to me that the insights and explanations were somewhat academic and did not touch some core of life which was there but not being spoken to. When I moved to metaphors and spoke of the group as mother, the young hero who leads the dragon fight and the journey into the desert to meet and talk with God, then I became aware of a total involvement with the explanation on the part of those who were willing to have a dialogue between the ego and the self. Until that dialogue occurs and is sustained we will have only superficial understandings of our behaviors. A symbol that plays a role in our lives and that we do not understand, governs us and to the extent that this occurs we are stripped of our autonomy.

These explorations into the dynamics of small groups have revealed many findings but they have also given some strong messages. We cannot leave this kind of learning to happenstance or even to the church or family. It is critical to our very survival, individually and as a species.

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ADULT EDUCATION RESEARCH IN NORTH AMERICA AND BRITAIN : A COMPARATIVE ANALYSIS OF PERCEPTIONS AND PRACTICE

Stephen Brookfield

Research Officer, NATIONAL ADVISORY COUNCIL FOR ADULT AND CONTINUING EDUCATION (United Kingdom)

British adult education researchers are usually characterised by their North American counterparts as being interested primarily in historical and philosophical concerns explored through qualitative modes of inquiry. Their work is recognised as displaying a certain literary grace and an endearing, if misguided, amateurism. Conversely, British adult educators tend to view North American research as preoccupied with quantitative measurement to the exclusion of an appreciation of the subtleties and nuancies of human behaviour. This paper examines the validity of these stereotypes through an analysis of classic statements on adult education research and substantive research concerns as reflected in registers of research and learned journals. The author's time as a visiting professor in a North American University department of adult education (U.B.C.) and his attendance at American and Canadian adult education research conferences provide the experiential base for this analysis.

Perceptions of the Research Process : North America

A review of the perceptions of leaders in North American adult education regarding the purpose and form of adult education research reveals a picture sharply at odds to the stereotype outlined above. In an AEA symposium on adult education research, for example, Malcolm Knowles commented on the primacy of qualitative research when reviewing those studies which had influenced his teaching. He also declared that he felt pressure from colleagues in related disciplines for him to do more quantitative research. This, he believed, reflected the myth that "only if it can be counted is it real". He concluded by asserting that case analysis had been "a more fruitful source of insight about adult teaching and learning" (Knowles 1972;302).

Ten years previous to these remarks, in one of the modern classics in our field, Cyril Houle had made the (to some) astonishing admission that in his study of 22 continuing learners he had "no conscious hypotheses". His data collection technique was chiefly to encourage his subjects "to talk freely and frankly" and he acknowledged that "themes - such as the significance of stimulators and of enclaves - emerged during the course of reading through the cases" (Houle 1961;13). This awareness of emergent themes and concepts pre-dated by several years the grounded theory approach of Glaser and Strauss (1967). Jerold Apps has warned against "a ritualistic approach to empirical research" and proposed that adult educators research "evaluative and prescriptive questions" (Apps 1973;63). He has also drawn attention to the covert value judgements and hidden assumptions underlying

De Montfort House, 19B De Montfort Street, LEICESTER LE1 7GE,
United Kingdom

research (Apps 1979).

Finally, professors at two Canadian Universities have recently argued for a methodological pluralism in research. William Griffith has welcomed the attention being given to inductive, qualitative and participatory research methods and believes that debate on their merits "could breathe new vitality into adult education research worldwide" (Griffith 1979;142). Roby Kidd has condemned the "bland, homogenised, deodorised, anaesthetised prose with which we report most educational experiments, inventions, innovations" (1981;3). He criticises the mutually exclusive nature of much debate on qualitative and quantitative methods and argues that "it is not possible, and may never be possible, to assign consistent numerical weights to all human attributes, such as love, fear, rage, wonder, hope, responsibility" (1981;5)

Perceptions of the Research Process : Britain

The preceding statements all display a rejection of methodolatory and an openess to alternative modes of research. A similar pluralism is evident in the writings of British adult educators. Ralph Ruddock, for example, has criticised the damaging and naive approach which equates research with measurement. He argues for the "use of non-metric qualitative research techniques, which are available in great variety" and for a "phenomenological scepticism" regarding researcher's versions of reality (Ruddock 1980;1).

Pilsworth and Ruddock have also noted that "whereas we now possess a wealth of facts and figures about particular objectifications of the educational process we have reached a point where we are understanding less and less about human behaviour" (1975;33). They advocate the greater use of qualitative and phenomenological methods to counter this trend. Holmes (1976) has pointed out the sterility of quantitative methodology in studies of adult non-readers and argues that adopting the canons of classic scientific research methodology only provokes hostility. Finally, in their guide to APPROACHES TO RESEARCH IN ADULT EDUCATION Fielden and Chadwick note that "few adult education research strategies rely solely on quantitative data" and declare that "because of the wide range of phenomena, a wide range of research styles is observable" (1979;6-7).

Substantive Research Concerns : North America

Although the classic statements by North American and British adult education researchers exhibit a similar openess to alternative modes of inquiry, the substantive concerns of researchers do differ. The last two decades have witnessed a qualitative and quantitative increase in adult education research compared to the 'chaotic' mass of descriptive studies noted by Brunner (1959). Kreitlow (1970) argued that adult education had changed from a marginal 'following' field of study to a 'leader'. Copeland and Grabowski (1971) confidently declared that more research was formulated within a theoretical framework and that the quality of descriptive studies was being raised through the development of multivariate analysis. These reviews, plus those by De Crow (1969), Hiemstra (1976) and Grabowski (1980) suggest that the following are the chief

substantive concerns of North American adult education researchers : adult learning, adult basic education, instructional processes, continuing professional and management education, self-directed learning, participation in adult education, program planning, and evaluation.

Substantive Research Concerns : Britain

British researchers do not have access to the range of research registers available to their North American counterparts. Charnley (1974) has reviewed abstracts of masters and doctoral theses presented since 1945. The University of Manchester compiles occasional registers of research in progress and the National Institute of Adult Education has recently published reviews of research on mature students, the elderly, the voluntary sector, the disadvantaged, and open learning.

From such a restricted data base it is hard to offer useful generalisations concerning the most favoured substantive areas for adult education research. Of the 495 entries in the most recent register of research compiled by Legge (1977), 139 are concerned with various aspects of local adult and community education programs; for example, "The Home Office Experimental Community Development Project in Liverpool". This supports Elsey's finding in his survey of extra-mural departmental research that "a great deal of writing and research activities of members of staff, like that of teaching, is firmly rooted in the life of the region" (1977;123). The community orientation of adult education research is also illustrated in Legge's register and in the analysis of theses at the Universities of Manchester and Nottingham conducted by Mee (1978), where community education or community development are ranked second in order of importance as graduate research topics.

The preponderance of comparative case studies, especially of adult education in the third world, is also evident in Legge's and Mee's directories. This is explained by the commitment to recruiting overseas students displayed at the University of Manchester and the fact that the Manchester department was responsible for 205 of the entries in the Legge register. Other substantive categories featuring prominently in these directories are analyses of clientele, instructional methods, adult education policy, adult learning, and the history of adult education.

The Dissemination of Research

The editors of the two chief adult education journals in America draw a clear distinction between the functions of their two publications. ADULT EDUCATION is concerned with research and theory in adult education, while articles concerned primarily with the implementation of the techniques of practice are within the scope of LIFELONG LEARNING/THE ADULT YEARS. The division between a journal devoted to research and theory, and one devoted to practice, is not evident in the British scene to anything approaching this degree of mutual exclusivity. STUDIES IN ADULT EDUCATION was launched "to provide an opportunity for the publication of scholarly articles and research studies" (Kelly &

Stephens 1971;35) while ADULT EDUCATION places its emphasis on providing an opportunity for administrators and practitioners (professional and voluntary) to exchange ideas and information about policy and action. However, both STUDIES IN ADULT EDUCATION and ADULT EDUCATION include articles presenting empirical research, recording program developments, engaging in philosophical analysis, and expressing personal belief or opinion. Neither journal issues guidelines for contributors and neither makes prescriptions regarding the content or tone of potential contributions. Both include articles by local authority staff, university teachers, administrators, librarians and industrial personnel.

In a revealing comparative analysis of the journals ADULT EDUCATION (USA), STUDIES IN ADULT EDUCATION (UK) and CONTINUING EDUCATION IN NEW ZEALAND from 1970-1974, Guy (1978) did point out that experimental research studies constituted 18.3 per cent of ADULT EDUCATION (USA) articles, but only 2.1 per cent of those in STUDIES IN ADULT EDUCATION. Also, whilst there were no articles of a philosophical nature in the American journal during that period, 10.6 per cent of the articles in STUDIES IN ADULT EDUCATION dealt with philosophical issues or concerns. Articles concerned with local program developments and projects were the largest content category in STUDIES IN ADULT EDUCATION (21.3 per cent) but accounted for only 3.7 per cent of ADULT EDUCATION (USA) contributions. This supports the point made earlier concerning the British prediliction for recording aspects of local adult and community education provision.

Conclusions

We can say, then, that the comments of North American and British leaders in adult education on the research process display a remarkable congruence regarding the admissability of a wide range of alternative methodologies. However, in journals and registers of research there is a marked distinction in terms of methodology and content. Articles reporting research in the ADULT EDUCATION (USA) journal frequently exhibit a sophisticated experimental research design and are of a quantitative, statistical nature. Unlike articles in STUDIES IN ADULT EDUCATION and ADULT EDUCATION (UK) they would be hard to understand were the reader not to possess an advanced knowledge of statistical techniques and research methodology. There is thus an interesting dysjunction between the beliefs of writers such as Houle, Knowles, Kidd, Griffith and Apps, and the strategies of researchers in the field.

It is also apparent that researchers in North America draw a clear distinction between an audience interested primarily in research and one interested in practice. This distinction is absent in Britain. There is also a difference with regard to substantive areas of concern with a British preference for community adult education and comparative adult education, and an American interest in continuing professional education, program planning and evaluation.

Finally, it is instructive to consider recent transatlantic reviews of British and North American adult education research texts. The 1980 AEA Handbook on CHANGING APPROACHES TO STUDYING ADULT EDUCATION (Long and Hiemstra 1980) was criticised in Britain by Marriott for "its almost complete failure to surprise or challenge" and the absence of phenomenological or radical-critical approaches (Marriott 1980;267). Similarly, while Ruddock praised the "generous liberal ethic" of the book, he too bemoaned "the exclusion of radical perspectives" and the absence of action or participatory research (Ruddock 1981;72). He also criticised the exclusively North American frame of reference of the book.

Conversely, the American reviews of the 1974 Charnley register and the 1977 Legge register commented on the "reluctance of British adult education researchers to use the research hypothesis as a guiding tool for empirical investigation" (Simpson 1978;56) and the "somewhat compulsive penchant for historical research" (Boshier 1977;232). Notwithstanding the agreement amongst leaders in the field, it seems that the stereotypes suggested in the first paragraph of this paper are rooted in reality and that the virtues which practising researchers in the two countries hold dear are regarded as unfortunate and misguided aberrations by their transatlantic counterparts. As Michael Moore commented in a broadcast from the Open University (UK) to students at the University of Wisconsin, "in spite of availability of journals and transatlantic flights, while other scientists seem able to keep up with the methods and results of colleagues abroad, in education we still seem to live in two different worlds" (1980;9).

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SUCCESSFUL INDEPENDENT LEARNING OF ADULTS OF LOW EDUCATIONAL ATTAINMENT IN BRITAIN : A PARALLEL EDUCATIONAL UNIVERSE

Stephen Brookfield

Research Officer, NATIONAL ADVISORY COUNCIL FOR ADULT AND CONTINUING EDUCATION (United Kingdom)

To declare that adult learning is ubiquitous is to assert a simple and self-evident truth. Learning occurs throughout the developmental stages of adulthood and in a variety of settings, only some of which fall within the category of formal adult education provision. As Kulich has pointed out, "up to fairly recent times, when most nations accepted a goal of widespread and readily available schooling for everybody, self-education was the prime way for man to cope with the world around him" (1978;310). Testimony to the extent of contemporary self-directed learning among adults has been provided by Tough, whose investigations "must constitute one of the most significant adult education research endeavours of the past two decades" (Brookfield 1981b;110). However, the studies undertaken by Tough (1978, 1979), Penland (1979), McCatty (1973) and others display three distinctive features. Firstly, their samples have included a disproportionate number of educationally advantaged, professional adults. Secondly, these adults have been chosen at random, not because of any identifiable expertise in self-directed learning. Thirdly, the learning projects of these adults have been short-term, measured in hours, weeks or months.

Successful Independent Learners

In 1977 the writer began a three year study of a very different sample of independent learners. To be included in the sample selected for study, the learning of the adults selected had to satisfy two criteria. It had to have resulted in the development of such a high level of expertise that the learner had been awarded the acclaim of fellow learners and enthusiasts at local or national level. Also, such expertise had to have been developed without participation in externally planned programs of instruction. Thus, their learning was independent of external instructional control, independent of institutional accreditation or recognition, and independent of any institutional financial support.

Using the measure of peer acclaim, 25 independent learners were chosen to comprise the main research sample. The focus of the study differed in all three of the features outlined above as characterising the Tough stream of research. Firstly, the formal education of sample members had ceased at the age of 16 and these adults were mostly employed in semi-skilled, non-professional occupations. Secondly, they had been deliberately chosen for inclusion in the study because of their visible success in conducting

De Montfort House, 19B De Montfort Street, LEICESTER LE1 7GE, United Kingdom

independent learning projects to a high level of expertise (as measured by local and national peer acclaim). Finally, the adults surveyed had explored an area of interest (such as dog breeding, philately, beekeeping, horticulture, or ornithology) for a mean length of 22 years and a median length of 16 years.

The methodology of the study has been documented in a previous AERC proceedings (Brookfield 1981a). Briefly, the writer was concerned to explore subjects' perceptions of their years spent learning independently. Open ended interviewing was felt to be the most suitable data collection technique and a grounded theory approach was adopted towards the coding of interviewee comment, the identification of major substantive themes, and the generation of concepts and classifications. A small sub-sample of ten correspondence students was randomly assembled for purposes of comparison with the independent learners and the extent to which the correspondence students exhibited independence and autonomy in their learning is discussed in Brookfield (1982). This brief report of the research concentrates on the activities of the 25 independent learners.

Origins of Independent Learning

Unlike the correspondence students, the independent learners experienced great difficulty in recalling exactly the events, people and feelings which had prompted them to begin what became lifelong learning projects. Their self-image was such that they would assert that they had 'always' been ornithologists, musicians, fitness enthusiasts or anglers. The influence of key individuals emerged as the most important factor with twelve respondents tracing the awakening of their interest back to parental or spouse encouragement. The role of the father was particularly noticeable with six learners attributing the development of their enthusiasm solely to paternal encouragement. The importance of peer group influence was mentioned in seven interviews but the peer group tended to act as an early reinforcer of developing interest rather than being its direct instigator.

Attitudes to Learning

Three characteristic attitudes towards learning were exhibited by the independent learners; their belief that their activities represented the gradual exploration of a limitless field of knowledge, their catholic eclecticism in disregarding conventional subject boundaries, and their perception of belonging to a fellowship of learning. The interviewees were unable or unwilling to specify an end point to their studies, but there was no sense of failure about this. Rather, it was intimated that if the point of complete command of their field was reached, the challenge and thus the enjoyment of learning would disappear. Omniscience was held to precede intellectual stagnation. The freewheeling approach towards crossing conventional subject boundaries and exploring related fields could make almost impossible demands on the learner's time. There was, however, a marked resistance to narrow specialisation.

Whilst these adults were engaged in idiosyncratic and individually devised learning activities, they identified themselves as belonging to a larger learning community, a group of enthusiasts sharing the same pleasures, concerns and difficulties. Learners exploring widely differing specialisms felt themselves to be members of an intellectual fellowship in which there was no sense of knowledge being privatised. Members were ready to share their knowledge and experience with any who asked.

Learning Groups and Networks

The independent learners were gregarious in their learning; independence clearly did not mean isolation. 20 learners referred to membership of some kind of club or enthusiasts' society and a total of 65 societies was mentioned. 12 respondents belonged to two or more such groups and two belonged to more than ten societies in their specialisms. The human resources of accumulated knowledge and expertise contained within these groups were identified repeatedly as the most important source of information in an unprompted, spontaneous fashion and those group members possessing skills in a specialist area would be consulted for assistance in solving problems.

These learning encounters were latent rather than manifest societal functions; that is, they took place in addition to, and separate from, the official business of the society. Despite their serendipitous nature, however, casual conversations assumed far more importance than formal society lectures for the development of individual expertise. The perceptions of these adults illustrate the fallacy of regarding independent learners as operating in some kind of isolated social and intellectual vacuum. Independent learners are not, as Moore has reminded us, intellectual Robinson Crusoe's (1973;669).

Since one of the criteria for sample membership was local acknowledgement of the individual concerned as expert in his particular field, it was not surprising that such fame resulted in unskilled newcomers to the field seeking out the expert concerned to request advice on the best way to develop their talents. Relatively skilled enthusiasts were also prompted to contact the learner for the purpose of obtaining specific advice or specialist equipment. In this way the specially skilled learner came to serve as a resource consultant and skill model (Reimer 1971;116) for enthusiasts possessing various degrees of expertise.

Evaluating Independent Learning

One danger of this research was that evaluative criteria employed by independent learners were likely to be subject specific and therefore easily missed by a researcher who was a layman in most of the enthusiasms surveyed. Objective indicies of evaluation were mentioned more frequently than their subjective equivalent. Objective indices related mainly to peer recognition - hardly surprising given that the criterion for sample membership was peer acclaim of subjects' expertise. Success in independent learning was felt to be indicated by the bestowal of peer approval and recognition. Such acclaim was granted in six distinctive ways as

follows:-

(1) Requests for written contributions to enthusiasts' journals
(2) Repeated requests from fellow enthusiasts for advice
(3) Selection as team member in tournaments and competitions
(4) Invitations to lecture to other clubs and societies
(5) Conferring of honorary society membership
(6) Election to judge status

In some fields there existed a convenient standard of measurement against which the learner's progress could be judged. The fitness enthusiast guaged his increasing strength on the basis of the weights he was able to lift. A bird breeder linked his success to the fertility rate of birds in his aviary. Competitive success was also an evaluative index which was highly quantifiable. An enthusiast could assess his success by the amount of money won, or the number of trophies gained, and a project's terminal point could certainly be translated into terms of competitive triumph.

Subjective indices of evaluation were mentioned in seven interviews. Such indices could be grouped under the general category of 'developing critical confidence'; that is, the belief that one's knowledge was such that one could call into question the pronouncements of experts in the field. What had once been a respectful acknowledgement of superior expertise was replaced by an ability to detect mistakes in revered texts, or by direct criticisms of conventional wisdom.

Problems of Independent Learners

One of the most surprising aspects of the study (to this writer) was the apparent absence, or the relatively insignificant nature of, problems faced by the independent learners. To none of the independent learners were those problems encountered during the execution of their projects at any stage regarded as threatening the continuance of the project. On reflection, however, there are two reasons why the apparent absence of problems is not as surprising as first seems the case. Firstly, subjects who felt a major part of their efforts were devoted to dealing with irritating difficulties rather than experiencing the pleasures of learning would be unlikely to continue their learning for very long. They would not, therefore, achieve the degree of expertise required for inclusion in the sample.

Secondly, it may be that the term 'problem', with its connotations of blockage and obstruction, was an inappropriate one to use. There was evidence to show that the kinds of difficulties a researcher might label as 'problems' were regarded as enjoyable challenges, or interesting diversions, by the independent learners themselves. The problem of finding a more effective way of managing bee swarms was, for example, the central concern of the apiarist. It was not regarded as a difficulty blocking the progress of his learning, but rather as the absorbing focus of his efforts, a continuing source of interest and enjoyment. Interestingly enough, the correspondence students showed a much greater awareness of labouring under particular constraints and limitations.

Spouse Support

Houle's classic study of 22 continuing learners, THE INQUIRING MIND (1961), led him to venture the generalisation that "no matter how intensely an individual may want to learn, he or she usually does not do so very actively if the marriage partner objects. The cost of participation on such terms is too great a price to pay" (1961;43). His assertion was supported by a study of the first year's intake of Open University students where the author concluded that "active support is necessary for survival since the demands made on the family are so great" (McKintosh 1976;244).

In the present study the picture which emerged was one which paralleled that drawn by McKintosh in that it positively emphasised the strength of spouse support, rather than merely commenting on the absence of opposition. For 15 of the 28 married subjects, the marital partner had played a crucial role in the learning activity, often joining their spouses' clubs. A further 11 subjects attested to the continuing tolerance and patience of their partners. The similarity of response on this theme exhibited by independent learners and correspondence students alike, was a striking feature of the research findings. It should be remembered, however, that the logic of Houle's and McKintosh's arguments is such that there could hardly have been any other response. Also, given that the median length of independent learning projects was 16 years, it is hard to see how the marital partnership could survive for such a period without acceptance by the wife or husband of the partner's learning.

A Parallel Educational Universe

These independent learners represent a submerged dimension of educational activity; encounters and exchanges were taking place without accreditation from, or recognition by, professional educators. It was as if the town in which most of the subjects lived contained a parallel educational universe alongside the official provision of schools and colleges. The two systems would occasionally cross as when, for example, a society would hire a room in the local adult education centre for a meeting or lecture. But on the whole, formal educational provision was regarded by the independent learners as irrelevant to their circumstances.

Some adult educators would no doubt feel threatened by the revelation of a substantial amount of independent learning learning occurring within their communities. They would seek to annex it to their institutions or simply refuse to accept that learning characterised by such initiative and persistence could take place in the absence of professional supervision. It is to these two groups that the contents of this paper are directed. In one small English town it has been shown that a number of individuals have achieved visibly high levels of expertise (judged by the acclaim of their peers) without the benefit of professional instruction. They have used enthusiasts' societies to good educational effect, evolved evaluative criteria for themselves, learned to set learning goals, and prompted others to engage in learning. A recognition of the validity and importance of this learning should lead to the sensitive provision of support by those within the formal educational system. The evidence suggests, however, that whether or not such support is forthcoming, the efforts of adults to take on

the challenge of independent learning, in isolation from the educational establishment, will continue.

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I. FROM CHAOS TO ORDER IN PROGRAM PLANNING: A SYSTEM FOR SELECTING MODELS AND ORDERING RESEARCH

by

John H. Buskey
University of Nebraska-Lincoln

and

Thomas J. Sork
University of British Columbia

II. Introduction

During the past twenty-five years a substantial body of literature has developed which addresses the process of program planning in adult education. Growth of this literature has been particularly pronounced during the past ten years. To date little or no effort has been made to analyze this literature to differentiate approaches by comparing and contrasting characteristics of planning models which influence their theoretical or practical utility. Students, practitioners, or researchers who wish to identify and utilize models for specific purposes must search through this formidable maze of literature to locate pieces relevant to their interests. The purpose of the research project reported herein was to develop and then apply to the literature an analytical framework which illuminates useful distinctions among program planning models.

III. Background of the Research

After reviewing program planning literature published since 1948, three observations were made which provided the impetus for this research. First, it was apparent that writers generally ignore one another's work when writing about program planning. Only in rare instances did writers acknowledge similarities or differences between their models and those proposed by others. Second, planning models seem to vary more due to contextual differences than to substantive differences in planning steps, tasks, or decisions. Overall, a great deal of commonality was observed across models in the elements included in the planning process, although the posited relationships between and among the elements did vary. Third, the body of research findings related to various elements of the planning process is virtually ignored. When discussing discrete elements of the planning process, few authors drew upon the available research literature when providing guidance for completing a step or making a decision.

The initial review of relatively current literature proved sufficiently useful that the decision was made to review all literature in which there was presented

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Copies of the complete analysis and the bibliography of models included in the analysis are available from: John H. Buskey, Associate Dean for Continuing Studies, 304 Nebraska Center, University of Nebraska-Lincoln, Lincoln, NE 68583-0900; or Thomas J. Sork, Assistant Professor, Department of Administrative, Adult, and Higher Education, University of British Columbia, 5760 Toronto Road, Vancouver, B.C., Canada V6T 1L2.

a complete program planning model. "Model" was rather loosely defined as a set of steps, tasks or decisions which, when carried out, resulted in the design of an educational program for an adult client group. The context in which the model was proposed for use was considered irrelevant as long as it was intended to be used to design educational programs for adults.

More than seventy books, monographs, articles, chapters, and papers were identified which met the criteria for inclusion in the analysis. Most contained models which were explicitly presented in narrative form or as a diagram. Some of the literature contained implied models which could be discerned through the organization of the text, but which were not explicitly presented. Models of both types were considered eligible for analysis. Most of the literature presented normative models, or models which represented the author's recommendation for how one should go about the task of program planning. These models, therefore, represented someone's idea of what ought to be. A small portion of the literature presented descriptive models, or models which represented how program planning was actually done in a particular context. Again, both types of models were considered eligible for analysis.

A final task preparatory to analysis of the literature was to develop an analytical framework, the elements of which would discriminate between and among the various models and provide a basis for selecting literature relevant to the needs of diverse users--practitioners, students, and researchers. The goal was to produce a consumer's guide to the program planning literature; the next task was to identify and define elements of analysis which would be useful in comparing and contrasting various models.

IV. The Analytical Framework

An inductive analysis of over 70 program planning models suggested that six dimensions were useful in describing the models and differentiating among them. Three of the dimensions were categorized as DESCRIPTIVE, and are used to differentiate models based on the characteristics of the planning situation for which they were designed by the writer. Three dimensions were categorized as EVALUATIVE, and are used to differentiate models based on qualitative factors which limit or enhance their utility for specific users. The following descriptions represent the current level of development and refinement of the dimensions.

A. Descriptive Dimensions

1. Planning context. "Planning context" means the environment or situation in which the planning model is intended to be used. The initial analysis suggests that authors have developed models for use in six major planning contexts: (1) General Adult Education (GAE), (2) Cooperative Extension Service (EXT), (3) Continuing Education in the Professions (CEP), (4) Training in Business and Industry (TNG), (5) Adult Basic Education (ABE), and (6) University Continuing Education (UCE).

The planning context was judged to be an important descriptive dimension because words used to describe the model, and examples provided to illustrate various steps, are often in a language or dialect which may not be easily understood by those working outside of that context. Therefore, each model

was categorized by the apparent context in which it was intended to be used.

2. Level of "program" emphasized. As summarized by Verner (1964, p. 34), the literature in adult education commonly discusses three levels of programming: (1) the design of an individual educational activity, such as a conference, class or course, (2) the composite of educational activities provided by a single organization, such as a YMCA, a church, a university, or an industrial firm, and (3) all of the educational opportunities for adults in a community.

Level of program was judged to be an important descriptive dimension because, although the planning steps may appear to be similar regardless of levels, the means used to complete a specific step may well vary by level. Most models seem to emphasize only one level of program although several models gave equal emphasis to two levels of programming, and each model was categorized accordingly.

3. Client system orientation. Some models appear to be oriented toward planning situations where the prospective participants are members of a single formal organization, such as a corporation, a school system, or a professional association. Other models appear to be designed for use in instances where the audience is general in nature and is not part of an identifiable client system or membership organization, hence the label non-membership orientation (Schroeder, 1980). Some models appear to be designed for both situations.

Client system orientation was judged to be an important descriptive dimension because it implies the ease with which clients can be identified. This characteristic has particularly important implications when planning needs assessments and when designing strategies for assuring participation. Each program planning model was categorized as having primarily either a membership or non-membership orientation, although a very few models gave equal weight to both orientations.

B. Evaluative Dimensions

1. Sophistication necessary to use model. Some models are relatively simple in design and presentation and were apparently developed to be used by lay persons or by persons not particularly sophisticated in the use of planning processes. Other models, however, are very complex and appear to require specific, if not extensive, education and training in order to make the fullest and most effective use of the model. Thus, this dimension is defined as the relative degree of training or experience required in order for the user to understand and correctly apply the model.

This dimension was considered important because of expected wide variations in user training and experience. The scale for this dimension is as follows: Low user sophistication means that little or no training or experience is required to use the model effectively. Medium user sophistication means that a moderate amount of training or experience in planning educational programs is required to use the model effectively. High user sophistication means that extensive training or experience is required to use the model effectively. Judgments were made by the authors as to the level of sophistication necessary to use each model.

2. Theoretical frameworks. Some planning models are based on explicitly stated theoretical frameworks or assumptions about adult learning, the planning process, how people interact with each other, or other factors. Other models may make such assumptions, but they are not explicitly revealed in the presentation of the model. This dimension was considered important because some users may desire only a how to do it, cookbook-like model, while others may be more interested in the assumptions and principles underlying a particular approach to planning. Including this dimension allows users to select models with an appropriate level of theoretical explanation.

The following scale was developed to suggest the degree to which a particular model is supported by an explicit theoretical or conceptual framework: no theoretical framework means the writer made no attempt to provide a rationale for why the planning process should be conducted as presented. Low degree of theoretical framework means the writer made some effort to explain why planning should be conducted as suggested but the evidence was rather weak. Medium degree of theoretical framework means the writer made a clear effort to provide such explanation, and the evidence presented seemed reasonable although not extensive. High degree of theoretical framework means the writer provided convincing evidence to support the suggested planning process. Each model was judged by the authors as to the degree to which a theoretical framework was explicitly presented in the work.

3. Comprehensiveness of steps in planning process. Each program planning model is unique, however, individual models usually are composed of several steps, and although the number of steps varies from model to model, there are specific steps common to most models. In order to compare one model with another, a "synthesized" model of nine specific steps was developed and used to compare individual program planning models with one another:

1. Analysis of planning context and client systems to be served
2. Assessment of learner's needs
3. Development of objectives
4. Selection and ordering of content
5. Selection, design, and ordering of instructional processes
6. Selection of instructional resources
7. Formulation of budget and administrative plan
8. Assurance of participation (marketing, promotion, and/or notification of participants)
9. Design of evaluation procedure

Some writers describe in detail how each step in their model should be completed, however, other writers describe only a few steps comprehensively and barely mention others. Thus, what might appear to be a work that treats program planning comprehensively, in fact, only treats a portion of the topic.

Comprehensiveness was judged an important dimension because of the practical need to do program planning. If a publication presents the model but provides limited guidance on how to apply that model it has little practical utility to program planners. This dimension provides the basis for selecting models which directly and fully address planning steps of interest to the user.

The following scale was developed to evaluate the comprehensiveness dimension: not addressed means the writer did not offer any guidance on how to complete

this step of the planning process. Low comprehensiveness means the writer did not provide enough information to successfully complete the step. Medium comprehensiveness means the writer provided sufficient detail to complete the step in a single prescribed fashion but did not offer alternative means to complete the step. High comprehensiveness means the writer provided sufficient detail so that the step can be completed by using two or more alternative approaches. Each model was judged by the authors as to the degree to which each step in the model was stated in a comprehensive manner.

C. Process Used to Make Judgments

Following the inductive analysis of over 70 program planning models, preliminary descriptions of the six dimensions were stated and a pilot test was conducted (Sork & Buskey, 1981). The authors collectively reviewed 18 program planning models. Using a worksheet version of Figure 1, each author independently recorded his judgment about each of the six dimensions. In the instances where the authors made judgments about the same model, the extent of agreement was sufficient to suggest that both researchers were interpreting the dimensions similarly. Subsequently, each difference of judgment was discussed, comparisons were made, and a single judgment was recorded for each dimension for each program planning model. Following the pilot test, all the program planning models were again reviewed by both researchers, independent judgments were recorded, differences about judgments on each model were discussed, and final judgments were recorded.

V. Next Steps in the Project

Development and application of the analytical framework was an important element of this research project, but additional work is planned. First, research related to each step of the planning process will be identified and reviewed. The nine-step generic planning model used in the analytical framework will provide a basis for organizing the research. Second, a framework will be developed for analyzing the research literature related to steps in program planning. Although the elements of such a framework have not yet been determined, it is expected that it will be analogous to the one used to analyze the planning models. It will contain elements which will both describe and evaluate the research so that users can select appropriate research based on relevant characteristics. The final product of this research effort should provide a means for ordering research so that it is both useful to practitioners and available to researchers and students. A secondary outcome of this analysis will be the identification of voids in the research literature which should be filled in order to have a thorough understanding of the factors which influence the quality of program planning in adult education.

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MODEL (Listed alphabetically by author within "planning context" categories)	DESCRIPTIVE DIMENSIONS						EVALUATIVE DIMENSIONS											
		LEVEL OF "PROGRAM" EMPHASIZED			CLIENT SYSTEM ORIENTATION				COMPREHENSIVENESS OF EACH STEP IN THE PLANNING PROCESS									
	PLANNING CONTEXT	Activity	Organizational	Community	Membership	Nonmembership	Sophistication Necessary To Benefit-Or Use Effectively	Degree To Which Model Has Explicit Theoretical Framework	ANALYZE CONTEXT & CLIENT SYSTEM 1	ASSESS NEEDS 2	DEVELOP OBJECTIVES 3	SELECT/ORDER CONTENT 4	SELECT/ORDER PROCESSES 5	SELECT INSTP. RESOURCES 6	DEV. BUDGET & ADMIN. PLAN 7	ASSURE PARTICIPATION 8	DESIGN EVAL. PROCEDURE 9	

KEY TO DESCRIPTIVE DIMENSIONS: To indicate "planning context," abbreviations for each of six categories defined previously were recorded; to indicate "level of program emphasized" and "client system orientation," an "x" was placed in the proper column(s).

KEY TO EVALUATIVE DIMENSIONS: ⊗ Not addressed, ○ Low, ◒ Medium, ● High.

Figure 1. -- Chart for Analytical Summary of Program Planning Models.

CONTINUING PROFESSIONAL EDUCATION AND BEHAVIORAL CHANGE: A PROPOSED FRAMEWORK

Ronald M. Cervero*
Northern Illinois University

Background and Purpose

One of the central questions now being asked about continuing professional education (CPE) is "Is It Effective?" While the responses to this question have been mixed, Houle (6:124) states that "objective global evidence exists that continuing education is effective in changing practices." Indeed, published reports have demonstrated behavior change resulting from CPE programs for physicians (2, 9, 10, 12, 14, 17, 20, 21), nurses (4), pharmacists (1,22), dentists (3), and teachers (15). Two of these studies, additionally, show improved client outcomes (i.e., lower hypertension, more student learning) resulting from the CPE programs (9,15). Thus, in addition to the global evidence cited by Houle, studies exist demonstrating the effectiveness of specific continuing education programs.

In the face of this confirming evidence, many educators and practitioners continue to decry the inability of CPE to produce improved performance. The opinion that CPE is ineffective often results from personal experience and is also supported by several studies (13). In fact, given the tendency not to report programming failures (18), it is reasonable to expect that the published literature does not reflect the true ratio of program successes to failures.

The answer to the question regarding the effectiveness of CPE is that some programs produce behavior change and others fail to do so. From an educational point of view, this is an unsatisfying response because the evidence does not help us understand why some programs were successful in promoting behavior change and how they were different from those programs which did not change performance. Those involved in CPE need to know what the success of a program depends upon. For this reason, attempts to learn whether CPE is effective is not likely to produce fruitful results. From a programming point of view, it is the wrong question.

A more useful research approach would seek to understand why some learning activities are more effective thatn others. To do this, it is necessary to define and measure characteristics of the educational act and the context in which it is embedded and discover how variations in these characteristics are related to the outcomes of interest. A research question in this approach would be "Under what conditions and for which types of individuals are which characteristics of continuing education most likely to produce changes in professional behavior and client outcomes?" In order to improve the planning and effectiveness of CPE, answers to this more complex question are needed.

A first step in this line of inquiry would be to construct a sound theoretical or research rationale that includes the major factors involved in the relationship between CPE and behavioral change. The purpose of this paper is to stimulate a more systematic and useful research effort on the effectiveness of CPE by proposing such a rationale and conceptual framework.

Rationale for the Framework

Houle defines three major and overlapping modes of continuing professional learning: inquiry, instruction, and performance (8). Inquiry is the "process

* 101 Gabel Hall, DeKalb, Illinois 60115

of creating some new synthesis, idea,technique, policy, or strategy of action" (8:31). In this mode, learning is often a by-product of the activity (e.g. establishing policy). Instruction is "the process of disseminating established skills, knowledge, or sensitiveness" (8:32). The mode of performance is the "process of internalizing an idea or using a practice habitually so that it becomes a fundamental part of the way in which a learner thinks about and undertakes his or her work" (8:32). This framework focuses on learning activities which are included in the mode of instruction. While the other two modes represent common and powerful forms of learning, they are not included because they appear to involve educational processes fundamentally different from instruction, because the mode of instruction is used most frequently by continuing professional educators, and is the one over which educational planners have the greatest control.

Among the many possible outcomes of CPE programs, the proposed framework focuses on changes in behavior or performance. While increased knowledge, improved skills, changed attitudes are important and appropriate outcomes, a common criticism of CPE is that participation in formal CPE programs has little effect on professional performance (19). This point highlights the importance of distinguishing between competence (ability to perform a given task according to set standards) and performance (actual execution of a task, voluntarily, according to set standards) when discussing the outcomes of CPE programs (5). While educators are fairly adept at increasing competence through CPE, the major concern now is on ways of improving professionals' performance through continuing education.

In a review of research in CPE, Griffith arrives at one major conclusion:

> successful programs of continuing professional education intended to implement lasting change cannot achieve their objectives if all of their emphasis is on changing the individual learner - at best such programs yield an increase in competence with no lasting effects on performance. Truly effective continuing professional education must view behavior as the result of interaction between an individual and his environment. (5:91)

An assumption of this framework is that individual behavioral change occurs within a social system. As a result educators must take into account the constraints and opportunities within the working environments of learners in planning programs that are intended to improve not only their competence, but also their performance.

Elements of the Framework

The framework proposed here borrows several of its key components from the "adoption of innovations" literature which has also focused on understanding how overt behavior change is brought about in a social system. Houle suggests that this field "throws substantial light on the practice of continuing professional education" (8:153). Using the results of over 1500 studies, Rogers and Shoemaker have synthesized a series of generalizations about the processes involved in the diffusion of innovations to the members of a social system (14). They define innovation broadly enough to include almost all of the objectives of CPE. Innovation is defined as "an idea, practice, or object perceived as new by an individual" (16:19). A key part of this definition is perceived newness, not objective newness as might be measured by the lapse of time since its first use or discovery, since it is the perceived newness which determines an individual's reaction to an innovation. Thus, the "newness" component of an innovation may be new knowledge, a new attitude, or a decision to implement something already known.

Rogers and Shoemaker have identified a number of factors associated with the adoption of innovations. Four of these factors which have direct relevance to CPE have been selected to form a coherent framework for analyzing why CPE programs

do or do not induce participants to make lasting changes. The framework as depicted in Figure 1 proposes that variation in four sets of independent variables would explain variation in the extent of behavior change and ultimately client outcomes. These four sets of variables are: 1) characteristics of the CPE program; 2) characteristics of the individual professional; 3) characteristics of the proposed behavioral changes; and 4) characteristics of the social system in which the professional operates.

Figure 1. Framework linking CPE and behavioral change

This framework proposes that the characteristics of the CPE program, the first independent variable, are only one factor responsible for inducing behavioral change. Almost all previous studies have used a one-variable framework. Even then, the studies typically consider the CPE program as a unitary construct, rather than as a set of processes, each of which may have a differential effect on the outcomes of interest. For instance, was a particular program effective because the learners were involved in the planning process or because the instructor was dynamic. This framework suggests that processes in the design and implementation of the CPE program must be identified and related to program outcomes.

The framework is composed of three additional variables which Rogers and Shoemaker implicate as key factors in the adoption of innovations. Clearly, the individual professional as the participant and one who will or will not change behavior must be considered an important factor. Characteristics of the individual professional thus compromise the second independent variable. The most well-planned program will not induce behavior change in an individual who is not motivated to change. There would appear to be a host of characteristics of professionals that individually or in interaction with program characteristics would be related to the extent of behavior change resulting from CPE programs.

A third independent variable is the type of proposed changes which can usually, but not always, be equated to the goals and objectives of the program. In past research it has usually been assumed that all proposed chances are equivalent units. Rather than consider proposed changes as a unitary construct, it seems useful to identify characteristics of proposed changes which might be differentially related to actual changes. For example, all things being equal, it would seem that a change which is simple to make yet produces dramatic results in client outcomes would be adopted more readily than a complex change that produces ambiguous results.

The final independent variable recognizes the social system in which the individual professional must actually implement the behavior change. This may be the most powerful yet overlooked variable in analyzing the effectiveness of CPE. Griffith comes the conclusion that: "To increase the probability of achieving success in any program of planned behavioral change, the educational agent must devise innovative approaches to working with those who have the authority to organize the working environment (5:91). Unless there are incentives or at least not disincentives within the working environment for the proposed changes, the CPE program is unlikely to be successful.

In the preceeding paragraphs, the structure of the major components of the framework were described. It was proposed that within the four major variables specific characteristics must be identified. Rogers and Shoemaker have implicated a number of sub-variables which can serve as a starting point for the identification of these characteristics. These sub-variables are briefly described in the following pages according to the four major variables.

The analogue of the CPE program in the work of Rogers and Shoemaker is the communication channel which they define as the means by which information gets from the source to the receiver. Five sub-variables which they identify relate to the efforts of change agents. They found that change agent success in bringing about behavior change is positively related to: the extent of their efforts, the degree to which their programs are compatible with their clients needs, the extent to which they work through opinion leaders, and their credibility in the eyes of clients. The adult education literature is replete with additional sub-variables that might be useful here. Prime candidates might be identified from program planning models which purport to prescribe good adult education practice (7,11). For instance, one sub-variable might be the extent to which participants were involved in defining the objectives of the programs.

In the second major variable, Rogers and Shoemaker conclude that all individuals are not equally likely to adopt an innovation presented to them. Rather, they adopt at different times and may be classified on the basis of when they first began using the new idea. Thus, individuals may be ranked according to their innovativeness, which is their relative earliness in adopting new ideas when compared with other members of their social system. Houle (8:155) suggests that active practitioners can be divided into four general groups according to their innovativeness -- innovators, pacesetters, middle majority, and laggards. These groups can be differentiated in terms of their dominant attitudes toward their professional practice and the nature and extent of education they undertake. It seems that the characteristics associated with these four groups could be considered sources of variation in explaining why a CPE program changed participants' behavior. Rogers and Shoemaker found that the following sub-variables are positively related to behavior change: more education , more specialized operations, more favorable attitudes toward change, risk, education, and science, seek information more, have higher knowledge of innovations, and have more opinion leadership. While these types of variables cannot be easily manipulated, they might suggest differential strategies for various groups of individuals.

The third major variable, type of proposed change, is what Rogers and Shoemaker describe as "perceived attributes of the innovation." They describe five attributes which are related to adoption of innovations. Relative advantage is the "degree to which an innovation is perceived as being better than the idea it supercedes" (17:167). Compatability is the "degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of the receiver" (17:167). Complexity is the "degree to which an innovation is perceived as relatively simple to understand and use" (17:168). Trialability is the "degree to which an innovation may be experimented with on a limited basis" (17:168). Observability is the "degree to which the results of an innovation are visible to others" (17:168). Based on these characteristics, we could predict that a CPE program which seeks to induce participants to use a new drug for the treatment of pneumonia is more likely to be successful to the extent that the drug has the following characteristics: 1) it is shown to be more effective in treating pneumonia than the drugs currently being used by participants in the learning program; 2) it can be prescribed in the same way as currently used drugs; 3) the participants clearly understand why the drug works; 4) it can be tried with some

patients before being used with all patients; and 5) other members of the participants' working group can know that he or she is using a new drug.

The fourth dimension of the framework is the social system in which the potential adopter is located. Rogers and Shoemaker define a social system as a "collectivity of units which are functionally differentiated and engaged in joint problem solving with respect to a common goal" (17:28). They argue that the social structure affects the rate of adoption through "system effects" which are the influences of a system's social structure (e.g., norms) on the behavior of individual members of the social system. The following system characteristics have been shown to be positively related to adoption: system norms which are positive toward adoption close interpersonal communication among the member of the system, and the extent to which a social system's legitimizers are involved in the decision making process related to the innovation. Analysis of this component may show that planning processes exist related to the sub-variables in the social system which, if used, increase the liklihood of program success. This would be especially true for CPE conducted at the workplace given the proximity of the program planner to the social system of the participants.

Conclusion

This framework is offered as a method for analyzing why CPE programs are successful or not in producing lasting changes in professionals' performance. After research based on the framework identifies factors which are significantly related to behavior change, these factors could be incorporated into existing program development models or be used to construct new models. The framework falls short of being empirically testable in its present form. It describes four generic classes of variables as opposed to operational measures that must be employed in quantitative research. While several sub-variables have been suggested, possible interaction effects have not been discussed. Thus, the logical next step would be to formulate a network of sub-variables within each area and hypotheses regarding their relationship to behavior changes, leading to operationalization, measurement, and testing on a practical scale.

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MULTIPLE REALITIES, ADULT EDUCATION, AND THE CROSS-CULTURAL IMPERATIVE

Michael Collins*
Kansas State University
Visiting Assistant Professor, University of Saskatchewan

This study lays out a theoretical(1) base for systematic program planning in the area of cross-cultural adult education. Our investigation focuses, to a considerable extent, upon the phenomenon of multiple realities which are constituted within the everyday life-world (total sphere of experience) of "wide-awake" adults(2). It incorporates the following concepts, all of which are of vital importance to any theorizing on adult education as a distinctive field of endeavor: the stock of knowledge, cognitive styles (governing conduct and experiencing), and inter-subjectivity. Reference is made to an experimental design deployed to ascertain the effectiveness of a recently conducted cross-cultural awareness program. In this context we cannot undertake an exhaustive study, but our initial inquiries should suffice for the purpose at hand. Our intention is to signify those principal constituents of adults' everyday experience which are essential to any systematic approach to planning cross-cultural programs.

The origin of all our reality is subjective(3), but there are many orders of reality each with their own distinctive modes of existence. These various orders of reality, or "sub-universes" as William James calls them, are constituted as real only to the extent that they are attended to by human beings. With the lapsing of this attention, the reality fades away.

Orders of reality, or sub-universes, are systematically structured and have an internal logic of their own. However, as we have indicated, they are constituted through the meaning of our subjective experience, not through the ontological structure of their objects. We confer the accent of reality upon them and make of them finite provinces of meaning. All experiences emanating from a finite province of meaning are indicative of a particular style of lived experience which can be characterized as a cognitive style.

Distinctive cultural patterns (typical modes of behavior, symbols, etc.), then, are constituted as real because groups of people collectively and purposefully endow them with meaning. When they cease to attend to the distinctive constituents of their culture, either through voluntary advertence or because of external pressures (or a combination thereof), their order of reality disintegrates. All this is well substantiated by historical and anthropological evidence. We are concerned with strategies to be undertaken by adult educators. Hitherto, well intentioned adult educators in North America and elsewhere have quite deliberately promoted to their students from different ethnic groups the styles and typical modes of behavior of the "dominant culture". This tendency has been graphically described in studies by Carlson and Seller(4). It is still apparent in the context of English as Second Language classes and very much embedded in pre-packages E.S.L. curricula. We have taken it for granted that the "dominant culture" is the paramount reality rather than one among many subjectively constituted orders of reality.

*Continuing Education, University of Saskatchewan, Saskatoon, Sask. S7N 0W0.

We are not now suggesting that adult educators do not have a crucial role to play in helping members of "minority" ethnic groups to acquire the language skills, typical modes of action, etc., of the "dominant culture". Rather, our analysis indicates that such learning should take place in contexts where the different orders of reality as represented by various cultures, including the "dominant culture", are no longer taken for granted.

The pedagogic representation of the "dominant culture" in objective form rather than as a subjectively endowed order of reality among multiple orders of reality is not tenable. This points us to the need to facilitate inter-subjective understanding within cross-cultural settings.

Increasingly, adult educators are emphasizing the importance of autonomous learning, of the accumulated stock of experience which adults bring to any problem situation, and of dialogic interaction. These emphases are very relevant to the enhancement of inter-subjective communication so critical for cross-cultural understanding. In tackling this problem, adult educators should, from the outset, evince a willingness to suspend temporarily all taken-for-granted beliefs about those aspects of their own particular culture which have a bearing on the learning context in hand.

In deliberately setting aside - bracketing - taken-for-granted assumptions about their own order of reality, educators legitimize, as it were, various orders of reality relevant to the cross-cultural setting. Participants from "minority" cultures are invited to engage critically as autonomous learners in the understanding of pertinent aspects of the "dominant culture", which is no longer represented as the paramount order of reality. In the ensuing dialogic interaction, a clearer understanding of the relevant meanings attached to the various orders of reality is realized and the necessary recipes and modes of action required to function within the "dominant culture" emerge from the context. A great deal might be achieved by incorporating these emphases into adult education endeavors to further cross-cultural understanding among groups made up solely of members from the "dominant culture".

The suspension of taken-for-granted assumptions does not entail a denial or denigration of the values and modes of action associated with one's own culture. It opens the way to a clearer understanding of what the norms we live by in our day-to-day activities are all about and to a realization that the norms and typifying modes of action of other cultures are to be assessed from their own context. Suspending our taken-for-granted assumptions, even as a temporary measure, is a very difficult matter, but it enables us to come to grips systematically with other orders of reality through inter-subjective understanding. There are, of course, an infinite number of orders of reality within each culture, and we can address ourselves to these in a like manner as the occasion arises.

Inter-subjective understanding emerges in the face-to-face relationship when the persons involved make a deliberate effort to set aside all taken-for-granted assumptions about the nature of things, events, etc. which become relevantly thematic in a particular context. In such a context, "consciousness is heightened". However, this does not commit us to the conscientization program of Freirean educators. The praxis of conscientization, like behaviorism, has about it the ring of determinism which is not at all conducive to the critical understanding of a life-world of multiple realities. For adult

educators, above all those with a serious commitment to cross-cultural understanding, the challenge lies in facilitating situations where they join with others in systematically exploring the constituents and structures of relevantly determined orders of reality.

Considerable attention needs to be placed on the stock of knowledge each person brings to the learning situation. Even prior to the encounter, in the planning stages, it is advisable to anticipate that the accumulated past experiences are to play a vital role. Our notion of the stock of knowledge is clearly distinguishable from the "knowledge stock" which Illich used to characterize, in a disparaging sense, the information and attitudes acquired in formal schools(5). Alfred Schutz has described the stock of knowledge for us in the following terms:

> The overwhelming bulk of this knowledge is socially derived and transmitted to the individual in the long process of education by parents, teachers, teachers of teachers, by relations of all kinds, involving fellow-men, contemporaries and predecessors. It is transmitted in the form of insight, beliefs, more or less well founded or blind, maxims, instructions for use, recipes for the solution of typical problems, i.e., for the attainment of typical results by the typical applications of typical means. All the socially derived knowledge is, to begin with, accepted by the member of the cultural group as unquestionably given(6).

Especially when we are focussing on cross-cultural concerns, it is apparent that adult learners bring within themselves much of the necessary curricula content. No proper understanding can be acquired without reference to the relevant aspects of the participants' accumulated stock of knowledge.

The formation of our stock of knowledge is autobiographical - the sedimentation of our prior experiences. It is this autobiographical dimension which distinguishes each of us from all others. Our uniqueness as individuals is established by the chronological sequence of past experience as well as by the 'contents' of that experience. Both the 'contents' and the timing of our prior experiences come into play in every circumstance, and they are decisive in the way we endeavor to structure our situation in our day-to-day activities within different realms of reality.

An aspect of the knowledge we assimilate through a process of sedimentation, during our day-to-day experience in the life-world, is a more adroit manner of broaching our problems. We try things out, and our projects meet with varying degrees of success or failure. These events, and their qualitative dimensions, are typically referred to by us in our subsequent projects. Our stock of knowledge is not merely a storehouse - or a bank, in Freirean terminology - for an ever-growing quantity of recipes. The wherewithall to bring the appropriate recipes to bear on our projects, to make critical evaluation, is embedded within the stock of knowledge and is enhanced by subsequent sedimentation resulting from our on-going experience of the life-world.

This brings us to a consideration of cognitive style which influences the way we experience various orders of reality, others' thoughts, motives, and actions. It refers to the way we govern our conduct and experiencing in day-to-day activities. Our cognitive style is constituted by the manner in which

experiences become assimilated within our stock of knowledge - when, and at what stage in our development did they occur. In order to enhance cross-cultural understanding, we need to account for relevant aspects of our own and others' cognitive styles or particular profiles as part of the process of inter-subjective communication.

Our analysis has indicated that a systematic, meaningful, approach to the furtherance of cross-cultural understanding through adult education necessitates:

1. An identification of the typical structures and ingredients of relevant orders of reality.
2. A deliberate effort to suspend, on a temporary basis, all taken-for-granted beliefs about those structures and ingredients in an effort to come to grips with their meaning and how they are determined.
3. A sustained effort towards effecting inter-subjective understanding through face-to-face dialogic interaction.
4. An emphasis on individuals' accumulated stock of knowledge and particular cognitive profiles as the foundation of contextually meaningful curricula.

CONVENTIONAL ASSESSMENT. This section briefly outlines how we might set about justifying a cross-cultural awareness program in terms of its effectiveness according to quasi-empirical (statistical) methodology.

For our purposes, a "Modified Solomon Four Group Design"(7) is recommended. Since complete random assignments to groups is unlikely to be a viable option, it becomes more feasible than the pure form set out by Stanley and Campbell(8).

MODIFIED SOLOMON FOUR GROUP DESIGN

Group	Eligible Subjects	Pre-Test	Treatment	Post-Test	Post-Post-Test
E1		O1	X	O2	O7
C1		O3		O4	
E2			X	O5	O8
C2				O6	

FIG. 1

O = Test scores on knowledge, attitude and personality variables.
--- Dotted line indicates lack of random assignment to groups.

Experimental Group E1 - Comprises random selection of one-half of participants in Cross-Cultural Awareness Program. To be pre-tested, post-tested, and post-post-tested.
Control Group C1 - Comprises one-half of group with characteristics similar to participants in X - C Program. To be pre-tested and post-tested.
Control Group E2 - Comprises remainder of participants in X - C Program. To be post-tested and post-post-tested.
Control Group C2 - Comprises remaining students of group with similar characteristics. To be post-tested only.

Once the control group is identified, pre-treatment equivalence on dependent variable and on certain demographic variables has to be established. An initial task is to establish statistical equivalency among experimental and control groups.

Instrumentation

1. Personal Data Sheet to obtain information from each subject in Groups E1, C1, E2, and C2 on relevant demographic variables.
2. A Multi-Factor Attitude Inventory(9) to measure attitudes on race, ethnicity, culture, and sex. The following factors are represented:-
   Factor I comprises items that characterize simplistic negative stereotyping.
   Factor II contains 32 statements which are positive and more complex. They constitute an "Active-Subordinate Scale".
   Factor III is made up of 12 statements which are quite general in their reflection of the notion of cultural pluralism.
3. Survey Instrument of Racial and Ethnic Knowledge
   For use in pre-testing Groups E1 and C1, post-testing Groups E1, C1, E2, and C2 and post-post-testing Groups E1 and E2.
4. Shostrom's Personal Orientation Inventory(10)
   To assess the personal values characteristics of subjects. Applied as in 3, above.

Personal data and pre-testing takes place immediately prior to the program, post-testing at its completion, and post-post-testing after a consequential lapse of time(11).

Treatment:

i) The Chi-Square test for contingency tables accounts for pre-treatment of Groups E1, E2, C1, and C2 as related to demographic variables.

ii) A 2x2 analysis of variance of the knowledge, attitude, and personal value characteristic post-test scores of all four sample groups in FIG. 1 determines (in statistical terms) the main effect of the learning which takes place (the "treatment"), the main effect of pre-testing, and the interaction of pre-testing with treatment. All effects to be tested at the .05 level of significance.

iii) A 2x2 analysis of variance with repeated measures determines the extent to which significant treatment effects discovered in the previous analysis lasts through the period between post-testing and post-post-testing.

A study conducted along these lines at Kansas State University(11) with senior student teachers concluded as follows:

1. The experimental groups which took part in the program scored significantly higher than the control groups on the Knowledge Scale and on all three factors of the Wilson Multi-Factor Attitude Inventory.
2. No significant difference was found between the experimental and control groups on Shostrom's Personal Orientation Inventory with the exception of one dimension in which the control group scored higher after "instructional treatment".
3. On the post-post-test, 26 days later, the experimental group showed no statistically significant loss on White's Knowledge Scale, or on Factor II and Factor III of the Wilson Multi-Factor Attitude Inventory.
4. After 26 days, the experimental group had a statistically significant loss in instructional effect on Factor I of the M.F.A. Inventory.

The limitations of the design and study cited with regard to sampling and methodology can be readily assessed in the usual psychologistic manner. However, in the context of this paper we will address, all too briefly, the critical setbacks entailed in deploying a methodological approach originating in the natural sciences (a distinct 'realm of reality' or 'province of meaning') to

assess value-laden human orientations.

When we adopt instrumentation for statistical deployment, there is a presumption that we can know at the outset what is to be experienced before the project begins. It fails to properly account for significant meaning changes and intervening events. Exactness exists only in terms of quantitative objects. Bringing statistical devices to bear on the complexities of cross-cultural dynamics imposes an aura of irreality. Our quest is for meaning, not unassailable certainty.

The experimental manipulation of taken-for-granted percepts which we have not adequately apprehended exemplifies the tendency proscribed by Edmund Husserl under the rubric of Psychologism. This fallacy inherent in this predilection is characterized in Alfred Schutz's outstanding analysis of inter-subjectivity. According to Schutz

> The person and his acts cannot be objectified and only that part of human existence which pertains to levels below the realm of the mind and freedom are accessible to experiments. For the Person and his manifestations are not open to perception in the same sense as the objects of nature(12).

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ISSUES IN THE METATHEORY OF PARTICIPATION RESEARCH

Sean Courtney, M.A.
Northern Illinois University

A moment ago of research time we were assured by leading researchers that we had reached an impasse in our attempts to explain why adults participated in education. A little later came some shiny prose from Jossey-Bass to say that all was not lost. Here are four models to explain participation, Patricia Cross told us, and mine is a fifth. Such a panoply of riches threatened temporarily to overwhelm us until the questions once more forced themselves back to the surface, and once again, we had to ask ourselves: what's going on. In 1979 we couldn't explain more than 10% of the variance (so Anderson and Darkenwald told us). Now, two years later we have 5 models vying eagerly with each other to go for the 90% jackpot. As the dust settled on the dustjacket we began to raise other eyebrows: where did all these models come from? And why did Cross call them models? Are they not "theories"? Are models better than theories? Somebody tell me what's going on.

What's going on is this: a travesty of knowledge due to blithe and cavalier disregard for a research tradition. Cross's ability to juxtapose "theory" and "model" testifies eloquently to a widespread ignorance in the field of Adult Education as to what advances in knowledge should look like; what questions they are meant to answer, and, why they are even desirable in the first place. Mostly, this is the story of how a motley collection of diverse practices and traditions - adult education - sought the bubble unity in an austere and remote metaphysic. And it began a moment ago of research time.

The story of Participation Research can be simply told. By 1959 - the publication date of Brunner's comprehensive overview of research in the field as a whole - Participation embodied a vigorous interdisciplinarity, deriving from sociology's preoccupation with forms of societal participation and association. Within half a decade, two major and two important contributions could be added to Brunner's: in 1962 and 1963, Johnstone and Rivera were undertaking field work for their monumental "Volunteers for Learning" as Jack London and his team were completing their survey of Oakland to be known as "Adult Education and Social Class"; in 1959 Verner and Newberry published "The Nature of Participation" and two years later appeared Cyril Houle's "The Inquiring Mind," a little yellow-and-blue book of some 90 pages.

It was possible at this time to set directions for the field; to map the best routes, and arm with the tougher, more resilient concepts. But these steps were never taken. London's contribution was buried, its echo surfacing briefly in Miller's overblown and ultimately facile "Field-force Analysis." Houle gave way to technicist tinkering via the grinning optimism of Roger Boshier. "Volunteers for Learning" became the blueprint for governmental censuses. And Verner and Newberry were republished in 1965 with no revision needed or attempted. Thereafter, despite all signs to the contrary, the field has languished for 15 years.

"Volunteers for Learning" was never more than a badly needed attempt to get at the socio-demographics of participation. Its tilt at reasons and motivation was suggestive but thin. It established once and for all - if it needed re-establishing after Brunner - that formal educational endeavour such as high school was the best predictor of continuing with education. It also showed up the existence of "class" as a variable determining the tendency to participate. Perhaps it was natural that it should have awoke the need to obtain accurate statistics as an ongoing concern. But "Adult Education and Social Class" was more than that. So was Verner and Newberry. So was Houle. At a time when there is increased pressure to develop a "discipline" of Adult Education from within now is a good time to ask: why were their contributions allowed to dissipate. What went wrong?

This paper argues that at the root of the problem lies a mistaken notion of what constitutes science when dealing with human action or behavior. It lies in a mistaken belief that to advance knowledge within the field of education it is necessary to employ the paraphernalia of physics. And it lies especially in a fear of confronting the molten labyrinth we call common-sense with any weapon more daunting than the bare brain.

The first mistake lies in assuming that just as the greatest advances in the physical sciences came about through the articulation of theory so too is theory the hignest goal of social science. The second mistake is to assume that theory appropriate to physics can be grafted unconditionally onto the study of hummans. The third mistake lies in assuming that just as we "progress" in our knowledge of nature through theory, so too does theory per se advance our understanding of humans. This paper deals with the second and last of these beliefs.

II

The most enduring tradition in modern psychology - and Adult Education is more influenced by developments in that discipline than any other - is behaviorism. While its star may now be on the wane nevertheless its puritanical hold on how investigations are to procede and its watchdog mentality as regards the kinds of questions which my be raised still prevails. It is this tradition which exerts the greatest influence on educational research. It is this tradition which has led Participation Research down the blind gully it has been following since Sherman Sheffield approached Cyril Houle for a dissertation topic.

The single most profound consequence to result from the Factor Analytic monopoly of research on motivation to learn is the banishing of critical reflection from the domain of enquiry. Simply put, none of the researchers who came after Houle intent on putting his typology to the test, actually argued its tenets, queried his observations or took him to task on his conclusions. There has been no sustained attempt to follow his schema's implications through to their logical nemesis. Thus, it was possible for Paul Burgess to publish a replication of Sheffield in 1971 and to introduce the putative existence of 7 rather than 3 factors without in any way explaining why he had been led to this number.

Astonishing yes but not unexpected given the negation of reason inherent in behaviorism. An extension of pragmatism, the behaviorist revolution entered the history of ideas with a bold stroke: it banished consciousness from the world. That was its charm. You didn't have to be a philosopher to study humans. The legal profession might be a sounder springboard for the aspiring psychologist (even if the salary was less attractive). Eliminating consciousness from explanations of human behavior had an unfortunate drawback, however. It also eliminated rationality. Behaviorism, it is no exaggeration to say, is the quintessential non-science of the irrational. As such, it has more in common with that philosophical demon - solipsism - than with the austere perfection of physics which it seeks to emulate. For the dreary solipsist and the behaviorist alike make the same epistemological claim: they deny the possibility of knowledge. The solipsist does it through his insistence on the supremacy of his own insights, or, more commonly, holds that the confusion in his own thinking testifies to the confusion inherent in all projects of understanding. The behaviorist likewise eschews ideas and insists on the mysterious, and always unexplained, potency of instruments to predict and control behavior but never to explain it. Instrumentalism in the behaviorist enterprise is a cover for irrationality. It is a form of laying on of hands. When seen to work it causes excitement and surprise, even consternation among the doubting thomases. Failing, as it inevitably does, it is revealed for the shabby and pokey obscurantism it really is.

Banishing consciousness and rationality as agents of effects also unseats values, a perennial nightmare for the tough-minded observer. The elimination of rationality results in a commitment to instrumentalism; hence, the love-affair with the computer as a thinking being. The elimination of values results in the rise of conservative and status-preserving forms of conduct within the scientific domain. But values are never quite eliminated; they are merely held in abeyance, and, forever, they hover about anxious for recall like ghosts in the machine. This state of limbo requires adherence to the status quo manifest in the surrounding polity. It is no coincidence that Descartes, following a similar "methodology", should have stood back from the flux of 17th century Europe, declining either to get involved or pass judgement as long as he was perfecting his system.

Unfortunately, for the behaviorist-oriented research paradigm, it is not easy to get anywhere sensible in the study of Participation without recourse to reasoning and values. Men and women reason with themselves - they initiate dialogues with themselves and others - when confronting the choice and decision that is participation. In so doing they experience pushes and pulls - values - which impede or facilitate their moves (as Beal's citing in Brunner clearly argues). Studying participation without regard for the individual's potential for critical self-reflection reduces moral to contingent behavior, and ends in a focus on action as a phenomenon sui generis rather than as a sign or index of something deeper and more significant. The final indictment of behaviorism is that it seeks order in the manifestation and not in the interplay between outward form and underlying structure. It is a kind of hocus pocus.

III

That participation is more than a simple yes or no to the question: did you or didn't you, much more than the mere endorsement of a checklist statement, emerged easily from the testimonies of some 80 adult students I talked to over a two-year period, in and around the city of Derry in Northern Ireland: mature men and women reflecting on their lives and coming to conclusions about them. We saw conflict and an attempt - often many attempts - at a resolution through an articulation of feelings and values. The possibility of participation is preceded and accompanied by a process of self-evaluation: an endeavour - often urgent - to come to grips with what matters in life; what is worth doing or worth having, and how education - just one among many choices - may fit into the overall scheme of things.

What I was attempting to do in this study was neither to refute nor confirm existing theories of Participation, but to side-step them in order to achieve what most studies, with the exception of Houle and one or two others, had failed to achieve: an "empathic understanding" (following Dilthey) of the participants themselves. I didn't really care why adults in general want education in general. I wanted to know why these men and women in this particular program in this corner of the world did what they did and what they thought about it. What it came down to was this: I cared more about the students than I did about the research.

What we came up with was this:

- Participation represented a clash with habit.

- It was a decision or series of decision involving choice and action.

- For some thought and action coalesced; for others they remained separated.

- Some "own"ed their decisions; others were more commonly caught between pushes and pulls.

- Reasons for participation split between underlying values of an abiding nature and overt, context-dependent evaluations, each following their own logic of integration.

- The single, more crucial dimension along which ran the wheels of participation was change: attitudes to change dictated the experience of participation.

As I conceived it, participation was a special kind of train-ride. The continuity of daily life, be it good or bad, reckless, blissful or indifferent, has this one overriding property: it is a habituated, well-oiled moving along. Like a train pushing gently through a plain, it encounters no object or obstacle, large or small, to charm it into a curve or twist. Life in some essential way, sometimes even despite its apparent variety and excitement, seems just such a somnolent train-ride. The train flashes by many side-tracks branching off into nowhere, seemingly. These represent change, rupture, a rending of continuity. But continuity, like a train-ride, is not easily halted; the trip down the side-track not easily defended. Most of all it's where nobody else

is going. You are alone, or so it seems.

In this model the return to education may or may not be the logical end-point in a chain of decisions. It may represent the culmination of all the various forays down side-tracks: it may be the logical end to which all the smaller decisions are leading. Just as logically, however, educational activity may be but one more in a series of decisions leading to some other objective or to no discernable objective at all. What all of these reflect, though, is a kind of struggle - we should look for conflict in the business of participation - with one's own identity. Remain on the train and your fellow-travellers give you back the image of yourself in the scheme of things. Do but quit this companionship for the eerie emptiness of the solitary siding and that identity - that thread of coherence running through the multiplicity of discrete, disparate events we call life - vanishes or seems to vanish. No mirror remains. No echo.

In this model, a person might choose but be unable or unwilling to act on that choice. Equally, he or she might act without appearing to choose. Someone who says: I've always wanted to go to university, but until now my children weren't old enough, is someone who has made the choice but lacked the freedom to act on it. Someone who says: I thought I'd try it and see what happened, is someone who has not made any choice but is acting in the hope that choice will be forced on him. Decision-making seemed to be a two-tier process: a realm of choice, involving debate about values and alternatives; a realm of action, involving the freedom or willingness to act. Each realm had its own logic and disease: there was the propensity to act without serious thought just as there was the inability to act at all.

As an example, among a number of students selected for special study, I noted three who had been hospitalized since leaving school. The reasons for hospitalization were as different in each case as they were genuine. The similarities lay in the conflicts surrounding them and in the courses of action prompted by the absence from the life of work: projects intended to disengage from forms of activity hostile to their sensibilities and imagination. Here was how one of them put it:

> "I was 21. I remember my birthday very well, possibly because I was in hospital. From that time on, I wanted to change my job. I wanted to do something about it. Maybe I had wanted to change it before that time (he left school at 15), but I remember it from that time because I even talked to doctors in the hospital about things, and they tried to advise me, tried to tell me where to go or who to see. I wanted to do something about it except night-classes which didn't suit me. I talked to all sorts of people about it. But there was nothing for me at the time."

Each of the three seized the opportunity of illness to reflect on change, debate it and take steps to implement it. In the above case, it took 15 years. In the others, change began almost immediately, though here again, there were many false-starts. But in all three cases participation was a frame of mind which spread over decades. I have no doubt that such moves and non-moves are essential components in the phenomenon of Adult Education Participation. They precede it; they rehearse it; they <u>are</u> it.

NOTES

The assessment of Participation Research presented in the opening section is taken from S. Courtney: Explaining Participation in Adult Education: the story of American Participation Research from 1930-1980 (unpublished, May 1981, pp. 52). The rejection of the behaviorist-prescriptivist strait-jacket has not yet been adequately developed, but is echoed in S. Courtney: The Factors affecting Participation in Adult Education: an analysis of some literature. Studies in Adult Education (Leicester), Vol. 13, 2, pp. 98-112, October 1981.

Section III is based on a two-year research project which took place in Northern Ireland and was published as The Magee Experiment: an analysis of adults in Education. Londonderry: Institute of Continuing Education/Magee University College, 1981, and as The Genesis and Evolution of a Certificated Course for Adults, also published by I.C.E. the same year. Confronting the notions of continuity and change as significant determinants in a person's decision-making configuration is the theme of S. Courtney: Continuity and Discontinuity in the Lives of Adult Students, shortly to be published by I.C.E. with the support of the National Institute of Adult Education.

Anyone interested in the ideas expressed here should contact the author care of Region I, Adult Education Service Center 3901 S. State Str., Chicago 60609, or through Northern Illinois University's Dept. of Adult Education, DeKalb 60115.

Title: Persistence of Adults in Independent Study
Author: K. Kay DeRoos
University of Minnesota

INTRODUCTION

The problem considered was persistence in independent study among adults who are fully employed. The research addressed the persistence problem of the active continuous response to completing an independent study program of three years' duration.

Independent study of the type examined here is similar to regular "classroom" educational approaches with the exception that the student is physically removed or "independent" from the instructor by way of distance throughout the extent of the program. This view of independent study is closely related to terms such as correspondence study or distance learning. A distinction is made between independent study of this nature and independent study from the viewpoint of "learner-planned" studies.

Independent study, or "distance" learning is becoming an important method of adult education because of its adaptability to the life situations of the adult students. More and more colleges and universities are usinng independent study because of its practical nature of allowing participants to remain off-campus and fully employed. An incentive of independent study is the opportunity to learn something that can be readily applied to one's immediate work situation as well as to what one needs to know in the future. The approach is effective because it deals with the numerous reality reasons why independent study is so widely used today by government, management and labor. This method of adult education has also been given support by legislative and regulatory bodies and its use has continued to increase throughout the world.

The completion rate of independent study programs, however, is far from outstanding. Since the completion rate is often low in independent study, the role of "persistence" becomes a major variable. Persistence has not been studied extensively in independent study programs within adult education, although there have been numerous studies of the persistence of undergraduates to complete their college degrees. Little is known about the long-term persistence in adult independent study programs of three or more years duration.

The concept of persistence has derived its meaning from its Latin orgin, persistence, where per means "by way of," and sistere means "to stand." The word carries the idea of remaining unchanged or fixed in a line of action (Ryans, 1939). Ryans has emphasized a theoretical distinction between the terms persistence and perseveration (perseverance), in that persistence refers to an active voluntary continuous response, while perseverance implies a continuous repetition of the same response through an inability to shift from one response to another (e.g., confinement in a prison or concentration camp). This study did not deal with perseverance, but focused on the persistence problem: the active voluntary continuous response to completing an independent study program of three years' duration.

3956 Beard Avenue South
Minneapolis, Minnesota 55410

METHODOLOGY

The purpose of this study was to investigate factors related to "degrees of persistence" toward independent study objectives among adults who have been enrolled in an education program of credentialing. The study population included all adults (N=174) who enrolled in the Independent Study Program for Hospital and Health Care Facility Administrators (ISP/HA), School of Public Health, University of Minnesota, in the years 1974 through 1977.

The Independent Study Program for Hospital and Health Care Facility Administrators is an alternative to on-campus graduate education. The program enables practitioners to build capabilities in areas related to actual performance. Upon successful completion of Courses I, II, and III, students are awarded a Credential of Advanced Studies in Health Services Administration by the School of Public Health at the University of Minnesota. The credits earned through successful completion of the three year-long courses constituting the ISP/HA may be used toward the requirements for a master's degree in hospital and health care administration at the University of Minnesota, provided that the student is admitted for graduate study and that certain requirements are met.

Persistence, the dependent variable, was categorized a priori into three major groups: nonpersisters, intermediate persisters, and persisters. The "degree of persistence" was measured by the number of independent study tasks completed on schedule. A scale of persistence was devised which used the total number of completed course units as the criterion. The ten-point scale allowed for two subgroups of nonpersisters and two subgroups of intermediate persisters. Alumni of the program who had successfully completed all the requirements on schedule in the three years were categorized as "persisters." Alumni who had been one or more years behind schedule were classified as a higher level subgroup of intermediate persisters. The lowest level subgroup of nonpersisters had completed seven or fewer of the required 33 units.

The major independent variables were learning style, locus of control, and achievement motivation. Various other individual and situational variables were also considered. It was hypothesized that a low external locus of control score (as measured by the Internal-External Scale, Rotter, 1966) and a high achievement motivation score (as measured by the Self Description Inventory, Ghiselli, undated) are directly associated with the degree of persistence. Another major hypothesis was that the degree of persistence exhibited by an independent study participant would be directly related to the degree of preference for an "abstract" style of learning (as measured by Kolb's (1971) Learning Style Inventory).

The general research design was a "causal-comparative" technique as described by Issac & Michael (1971). This technique investigates possible cause-and-effect relationships by observing some existing consequence (i.e., the degree of persistence) and searching back through the data for plausible causal factors. This design was in part ex-post facto in nature because some data items were collected after the events of interest had occurred, specifically the persistence effects.

The data analysis consisted of Chi Square Tests, Kendall's Tau B Tests, t-tests, and the Wilk's Lambda and Rao V methods of discriminant analysis. Conclusions reported are based on statistics that were significant at the .05 level unless otherwise noted.

It was assumed that locus of control, achievement motivation, and

learning style are characteristics that are relatively stable over time. Based on these assumptions the study population was assessed these characteristics through the use of mailed, self-administered standardized test instruments. The other independent variables were tested by constructing a profile of the adult participants based on past records and a series of questions included in the mailed survey.

RESULTS

The study population included a total of 174 individuals, of whom 52 were categorized as "persisters," 47 were "intermediate persisters" and 75 were "nonpersisters."

The ratio of male students to female students in the program was almost 10 to 1. The mean age of the males at the time of enrollment was 34 years and the mean age of the females was 40 years. No differences were noted in the degrees of persistence either by age or by sex. The majority (62%) of the ISP/HA participants held a college degree, 22% has between 12 and 15 years of formal schooling, and 16% had experienced one or more years of graduate studies. The level of education was not directly associated with persistence.

The job title of the ISP/HA participant had an effect upon persistence. Intermediate persisters and persisters were employed more often as assistance or associate administrators whereas the nonpersisters were more often employed as administrators. The size of the employing institution was also associated with the degree of persistence. Nonpersisters were employed to a greater extent by the smaller institutions of 50 or fewer beds while the persisters were employed by the larger institutions. There were no differences in persistence between those students who planned to finance over one-half of the costs of their participation in the program themselves and the student who expected their employing institution to finance over one-half of the educational costs.

The "advancement" and "status" reasons for enrolling in the program were of greater importance to the persisters than to the intermediate persisters or the nonpersisters. The "competency" reason was of great importance to the majority of the students at the time of enrollment in the Program, but it was not related to the persistence effects observed at a later time.

The response rate to the mailed questionnaire part of the study was 91%. Many of the ISP/HA participants who completed a considerable number of the required units did not complete the credential because they had changed employment and/or had experienced personal problems. These external forces affected the amount of time they felt they could spend on the ISP/HA units. Generally this group of intermediate persisters was not dissatisfied with the ISP/HA approach nor did they think the course work was too difficult. On the other hand, a few of the ISP/HA participants who had completed very few or no units indicated dissatisfaction with the teaching methods.

The entire group of respondents were asked to consider all the course work in which they had participated and indicate their general reactions to the program. The responses were favorable to the program and there was a direct association between degree of persistence and positive responses for most of the items.

The mean locus of control score for the entire study population was 6.19 and 5.54 for the group of persisters. This indicates that the ISP/HA

participants are "internals" who perceive a stronger self effort to performance relationship than do "externals" who believe external factors affect performance. Although the persisters exhibited a greater belief in internal control than did any of the other persistence groups, the mean scores were not significantly different. The achievement motivation scores of the four subgroupings of nonpersisters and intermediate persisters showed no differences in the analysis of variance when they were compared to the scores of the persisters.

The mean "learning style" score on the abstact/concrete dimension of the Learning Style Inventory was -3.00, indicating an overall preference among the ISP/HA participants for an "abstract style" of learning. The analysis of variance of these scores showed significant differences at the .10 level when the four subgroups were compared with the persisters. As a group the "persisters" showed the greatest preference for an abstract approach to learning (-4.46), while the lowest level of nonpersisters demonstrated a lesser (-1.26) preference for learning in an abstract conceptual manner. The difference between these two groups, who were at opposite ends of the persistence continuum, was significant at the .01 level.

A total of 20 independent variables were entered into a step-wise procedure of discriminant analysis in an attempt to explain variance between the persisters and each of the subgroups of nonpersisters and intermediate persisters. Six variables: abstract learning style preference, the status motive, the perceived amount of learning acquired, the perceived amount of work required for the independent study tasks, and post-entry and pre-entry job titles, together accounted for 53% of the variance between the persisters and the lowest level subgroup of nonpersisters. These same independent variables explained very little of the variability between the persisters and the subgroupings of intermediate persisters.

DISCUSSION

Neither age, nor sex, nor level of education was directly related to persistence. However, a job title of assistant/associate administrator in a larger hospital suggests that an individual will be more likely to persist in an independent study than an administrator in smaller hospital.

Many of the ISP/HA participants who completed a considerable number of the required units were prevented from completing the credential because they had changed employment and/or had experienced personal problems. These external forces affected the amount of time they felt they could spend on the ISP/HA units. Generally this group of intermediate persisters was not dissatisfied with the ISP/HA approach nor did they think the coursework was too difficult. On the other hand, some of the ISP/HA participants who had completed very few or no units indicated dissatisfaction with the teaching methods.

The Ghiselli achievement motivation instrument did not distinguish between levels of persistence and levels of achievement motivation as hypothesized. Achievement motivation was measured by the Self Description Inventory which had been developed empirically; the scale was based on an item analysis of the responses of a specified criterion group of "managers." The achievement motivation scores of the four subgroupings of nonpersisters and intermediate persisters showed no differences in the analysis of variance when they were compared to the scores of the

persisters. Since all the subjects of the ISP/HA study were persons in "management", it is not surprising that there was very little differentiation among the participants in their achievement motivation scores, and subsequently in their levels of persistence.

On the average the overall group of ISP/HA participants were "internals." Rotter (1966) has termed internal control the perception an individual has that an event is contingent upon his own behavior or his own relatively permanent characteristics. When an individual perceives some resulting event as being contingent on luck, chance, fate or under the control of powerful others or external forces, this belief is termed external control. The lowest mean locus of control scores that Rotter (1966) has reported is that of 5.94 for 155 Peace Corps trainees. The more typical mean score is the 8.29 reported for 1180 Ohio State University elementary psychology students (Rotter, 1966).

The characteristic which showed the strongest association with persistence in independent study was the preference for an abstract learning style. As hypothesized, this differentiation was greatest between the persisters and the nonpersisters who had completed very few independent study tasks. Kolb (1974) has demonstrated that "concrete" thinkers find theoretical readings unhelpful in the learning process but are helped by student feedback, working in groups and listening to the accounts of others. In contrast, "abstract" thinkers prefer case studies and thinking alone. Generally, they dislike exercise, simulations and talks by expert practitioners. The results in this ISP/HA study support Kolb's theory that "abstract" thinkers have the capacity to "think alone" and prefer this learning approach. Thus, they "persist" in ISP/HA because its approach stresses abstract thinking, especially in the later units of the Program.

Thus, the study found that participant age, sex, and past educational attainment were not related to persistence in independent study. The size of the employing institution was directly related to persistence in ISP/HA, but the job title of "administrator" was inversly related to this same persistence. Educational financial support had no effect upon persistence. The motives of "status" and "advancement" were directly related to persistence, but the "competency" motive had no effect upon persistence. An "abstact learning style" was directly related to persistence in independent study but the "internal" locus of control belief and the level of achievement motivation had no effect upon persistence.

CONCLUSIONS/RECOMMENDATIONS

The "degree of persistence" model as conceptualized in this study was upheld by the statistical analysis of the data. It is appropriate to study persistence from the aspect of a scale or continuum. Future studies of persistence, especially those dealing with continuing in or completing programs within adult and/or higher education, should consider viewing persistence from the aspects of "degrees" rather than absolutes of persistence and nonpersistence.

Independent study programs of the type examined here have great potential for meeting the professional, and personal needs of adults who are employed full-time. Thus, this approach should be further explored and extended to a variety of occupational and professional groups under the rubric of adult continuing education.

In spite of the general satisfaction with independent study programs for employed adults, less than half of the participants in the study

population finished the program during the time period recommended. Before independent study programs are endorsed by educators, the persistence factor should be carefully considered. The amount of time allotted needs to be carefully determined, and services to nonpersisters and intermediate persisters need to be built into the program model.

"Persistence" in independent study is determined by a wide variety of individual and situational factors. Further studies should be undertaken to assess more fully the impact of varying individual characteristics and external factors in long-term educational endeavors. Of particular interst would be a study of how persisters deal with the external factors that seemed to hinder the efforts of nonpersisters.

There was evidence that a greater preference for an abstract learning style was related to persistence in independent study. It may be that individuals who prefer to learn in abstract conceptualization ways, in contrast to the more concrete approaches are more likely to persist in independent study because the independent instructional approach fosters and encourages a more abstract type of learning. Individuals who prefer this approach continue or persist because it is enjoyable and congruent with their "style". If such a theory can be upheld there would be implications for many types of independent learning approaches, such as extension classes, correspondence courses, home study and distance learning. On the one hand, educators may try to recruit learners who prefer the more abstract learning approaches and thereby improve their completion or persistence rates in the educational programs. This implication would be based on the "matching model" or the aptitude-treatment-interaction research of the last two decades. Or, on the other hand, educators could try to develop and "teach" an abstract approach to independent study students in the hope that it will help the students learn more effectively and eventually result in improved persistence in educational tasks. Further studies concerning the relationship between an abstract learning style preference and the persistence of adults in independent study are indicated.

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THE DEVELOPMENT OF A NEW MEASURE OF LOCUS OF CONTROL ORIENTATION IN ADULTS: THE INTERNAL CONTROL INDEX

Patricia Cloud Duttweiler
University of Georgia

INTRODUCTION

This study was undertaken in order to develop and establish construct validity for a new measure of internal locus of control orientation in adults, the Internal Control Index. Locus of control orientation, a personality trait that appears to influence human behavior across a wide spectrum of situations related to learning and achievement (Lefcourt, 1976), concerns a person's expectancy for reinforcement. An individual with an internal control orientation believes that reinforcement is contingent on his own behavior whereas an individual with an external control orientation believes that reinforcement is contingent on luck, chance, or powerful others (Rotter, Chance, & Phares, 1972).

Although there has been considerable research on the locus of control construct in the past 20 years, previously developed measures have presented various problems. Most of the instruments have measured external locus of control, a dimension that appears to have a variety of sources. The previous measures have also been criticized for format, response set, dimensionality, and low reliability characteristics. The need for the development of a new measure has been expressed by various authors (Lefcourt, 1976; McDonald, 1973).

METHODOLOGY

The study was conducted in four phases: the pretesting developmental phase, the tryout testing, the field test administration, and the multitrait-multimethod construct validation procedure (Campbell & Fiske, 1959). The development of the measure began with the establishment of the nomological network that surrounded the locus of control construct (Cronbach & Meehl, 1955). Items were based on those variables that seemed most pertinent to internal locus of control: cognitive processing, resistance to influence attempts, delay of gratification, and interpersonal perception (Lefcourt, 1976).

The pretesting phase included an evaluation of items by graduate students and professors in order to identify those items that appeared to tap the internal control dimension. Response set was investigated and steps taken to attenuate the effect of the various sets affecting self-report measures (Cattell & Kline, 1977). The format of the items, the responses, and the instrument itself were all evaluated and revised to meet the requirements of clarity, conciseness, and ease of administration.

The tryout test was administered by professors and instructors throughout the southeast to a sample of junior college, continuing education,

Adult Education Department, University of Georgia, Athens, GA 30602

college, and university students. From the answer sheets returned, 548 usable sets of data were obtained. These date were subjected to item analysis and to a principle component factor analysis and a four factor varimax rotation. Based on these analyses, 28 items were chosen for the field test administration and construct validation procedure.

The field test administration involved a sample similar to that used in the tryout testing. Usable data from the sample were derived from 684 answer sheets. The score means were computed for each level of the demographic categories age, sex, race, education level, and socio-economic level; a high score (Max. 140; Min. 28) indicating high internal locus of control orientation. Analyses of variance, item analysis, and factor analyses were used to evaluate the instrument.

The multitrait-multimethod construct validation procedure included the administration of the Internal Control Index, Eysenck's measure of introversion/extraversion (Eysenck & Eysenck, 1969), and Mirel's Factor I of the Rotter I-E Scale (Mirels, 1970) to a sample of 133 Gainesville Junior College students. Also obtained were teacher's assessments of each student on locus of control and introversion/extraversion behaviors as observed in the classroom. Thus, the two traits, locus of control and introversion/extraversion, were measured by the two methods, self-report and teacher's assessment. The resulting correlation matrix was used to investigate the congruent and divergent validity of the Internal Control Index. Congruent validity was also evaluated by the correlation between the Internal Control Index and Mirels' Factor I of the Rotter I-E Scale. Item analysis and factor analyses were also computed for the data obtained from the Gainesville sample to determine if the findings of the field test would replicate.

RESULTS AND DISCUSSION

The results of the analyses of the field test demographic data showed small but significant differences between the means of each level of the categories age, sex, race, education level, and socio-economic level. In general, as subjects' age, education level, or socio-economic level increased their Internal Control Index scores increased (Table 1). Males had somewhat higher scores than females and blacks had somewhat higher scores than whites. This discrepancy between scores of blacks obtained from other measures, especially the Rotter I-E Scale, and scores obtained on the Internal Control Index might be explained by the findings of Gurin, Gurin, Lao, and Beattie (1969). In a factor analysis of the Rotter scale the researchers found two factors, Personal Control and Control Ideology. Gurin et al. believed it was the personal control factor that operated significantly in motivation and achievement and suggested that the inclusion of both factors in the same measure obscured the results for minority subjects. Since the ICI is designed to measure beliefs concerning situations in which the individual perceives the possibility of control, it may not obscure the internality of minority subjects who are high in that belief.

The item analysis showed significant (>.30) item total-score correlations (Table 2) for all but five items. The estimate of reliability using coefficient alpha was .84. All but three items had significant (>.30) loadings on the principle component factor analysis and the varimax two-factor rotation (Table 2) produced two replicable factors: Factor 1,

identified as Autonomous Behavior (accounting for 76.9% of the variation); and Factor 2, identified as Self-confidence (accounting for 23.1% of the variation).

The results of the Gainesville Junior College administration did not uncover significant differences in the demographic categories. The item analysis resulted in significant item total-score correlations (Table 2) for all except five items. The estimated reliability using coefficient alpha was .85. The factor analyses (Table 2) replicated the findings of the field tests. Principle component item loadings were not significantly different from those on the field test. The two factors produced by the field test Verimax rotation were also reproduced with essentially the same items in this administration of the index. However, the amount of variation accounted for by each factor was reversed. Factor 1 on the Gainesville administration (essentially the same items comprising the field test Factor 2) accounted for 76.4% of the variation while Gainesville Factor 2 (consisting of essentially the same items as field test Factor 1) accounted for 23.6% of the variation.

The multitrait-multimethod correlation matrix showed a small but significant ($r = .257$; $p < .01$) correlation between the Internal Control Index and teacher's assessment of locus of control (congruent validity) no significant correlation between the Eysenck measure of introversion/extraversion or the teacher's assessment of introversion/extraversion was found (divergent validity). Congruent validity was also supported by the moderate negative correlation between the ICI and the Rotter I-E Scale ($r = -0.385$; $p < .0001$).

The results of this study provide support for the use and continued development of the Internal Control Index as a measure of internal locus of control orientation. The item total-score correlations and the estimates of reliability of the Internal Control Index suggest the index is a stronger more reliable instrument for measuring internal locus of control in adults than previously available measures.

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Table 1
Field Test Mean and Standard Deviation of Subjects' Scores on the Internal Control Index by Categories of Age Group, Sex, Race, Educational Level, and Socio-economic Level

	Age Group				
	(A) Under 20	(B) 21-30	(C) 31-40	(D) 41-50	(E) Over 50
$\bar{X}$	103.7	108.1	112.1	114.5	120.8
SD	12.2	12.1	13.4	8.0	--
N	251	313	87	28	5

	Sex		Race	
	(A) Female	(B) Male	(A) Black	(B) White
$\bar{X}$	106.6	109.5	110.0	106.5
SD	12.6	12.4	11.6	12.8
N	508	173	186	485

	Educational Level				
	(A) Not H.S. Grad.	(B) H.S. Grad.	(C) Vo. Tech./ 2 Year College	(D) College Grad.	(E) Grad. School
$\bar{X}$	115.5	103.6	107.8	107.7	112.1
SD	--	12.1	12.6	11.5	12.0
N	2	199	313	41	125

	Socio-economic Level				
	(A) Professional	(B) Management	(C) Supervisory	(D) Semi-skilled	(E) Unemployed
$\bar{X}$	112.1	109.3	107.4	104.4	99.3
SD	11.1	12.0	13.0	12.0	11.6
N	86	156	274	117	45

Table 2
ICI Item Principle Factor, Varimax Rotation Loadings and Item Total-score Pearson Product-moment Correlations on Field Test and Gainesville Junior College Administrations

ICI Items	Principle Factor		Varimax Two-Factor Rotation				r_{IT}	
			Field Test		G'ville J.C.			
	Field Test	G.J.C.	1	2	1	2	Field Test	G.J.C.
1	.222	.225		.219	.307	.404	.213	.488
2	.493	.498	.467			.445	.454	.243
3	.448	.464		.482	.387		.400	.395
4	.396	.400		.280	.307		.342	.346
5	.396	.403		.369	.246		.348	.247
6	.381	.384	.403			.413	.345	.312
7	.407	.412		.557	.639		.347	.388
8	.275	.271	.318			.458	.256	.338
9	.387	.397		.526	.607		.336	.384
10	.312	.325		.295	.325		.283	.334
11	.436	.433	.550			.436	.394	.317
12	.236	.219	.240		.335		.223	.356
13	.454	.461		.675	.732		.371	.471
14	.489	.490	.648			.597	.447	.438
15	.404	.417		.507	.682		.360	.517
16	.413	.430		.352	.361	.414	.346	.518
17	.311	.308	.278			.203	.293	.217
18	.382	.391	.350			.430	.335	.294
19	.343	.354	.368		.374		.312	.401
20	.438	.448		.371	.492	.330	.359	.548
21	.366	.375	.308		.303	.323	.327	.412
22	.483	.475	.471			.467	.452	.462
23	.534	.537		.459	-.650		.476	.516
24	.411	.409	.455			.293	.379	.290
25	.426	.434		.378	.267		.384	.341
26	.509	.508	.483			.368	.469	.433
27	.516	.509	.566			.400	.469	.364
28	.482	.491		.419	.395		.411	.430

THE RELATIONSHIP BETWEEN PERSONALITY TYPE AND THE PARTICIPATION IN EDUCATION OF OLDER ADULTS

Betsy Gerads
University of Minnesota

INTRODUCTION

A gap exists in our knowledge about the educational participation of older adults. While a great deal of information is available about educational activities and participation patterns of adults, few investigators have dealt with factors influencing the participation of older adults in educational activities.

Psychologists have long realized the importance of both environmental and personality variables in the explanation of behavior. In recent years there has been and increased interest in the study of personality variables and personality change over the lifespan. However, the literature shows few studies which have been devoted to personality variables related to participation in education.

The purpose of this study was to provide additional information for understanding the participation of older adults in education. The study sought to answer the following question: Does a relationship exist between personality type and the extent of participation in education of older adults?

The theoretical framework used in this study is the typology of Carl Jung (1923), and applied through the work of Isabel Briggs Myers (1980). Their work offers a fresh perspective on people's patterns of dealing with their world. Specifically, the "personality type" gives insight into the way people gather information and the way they make decisions, defined here as preferences for: Extroversion-Introversion, Intuition-Sensing, Feeling-Thinking, and Perception-Judgement.

METHODOLOGY

Subjects included in this study consisted of a volunteer sample of 60 older adults participating in Wilder Foundation programs in St. Paul, Minnesota. A limitation of the study design was lack of representation sampling from the older adult population. The results of the investigation cannot be generalized with much certainty beyond the persons here described.

The 60 subjects were administered two questionnaires: (1) the Keirsey Temperament Sorter to reveal personality type, and (2) the Abbreviated Leisure Activities Survey to measure total educational participation.

The analysis of the data collected was accomplished primarily by means of the Pearson correlation tests. To further test the significance of the relationship between personality type and participation in education, t-tests were run on the four personality variables. Results were considered statistically significant at the .05 level of confidence.

For the data analysis, the four personality variables were coded and analyzed as a continium from high to low (i.e., high extroversion-low extroversion, etc.). For the purpose of this paper, the personality variables will be discussed in this form and as dichotomies (i.e., extroversion-introversion, intuition-sensing, feeling-thinking, and perception-judgement) as they were defined in the theory.

FINDINGS

Description of the Sample

Information obtained from the personal background of the respondents indicated that most (65 percent) of them 65 years of age or older were either married or widowed women with educational backgrounds ranging from 8th grade to some college or technical/vocational school. Almost half of the subjects frequented the Wilder Senior Center more often than once a week.

Personality Type

The data collected from the Keirsey Temperament Sorter indicated that the majority of subjects in this study scored high on the extroversion scale and low on the perception scale. The subjects were almost evenly distributed between "high" and "low" on the feeling and intuition scales.

Results from this study tended to be comparable to Myers' (1980) research studies of the general adult population regarding percentage distributions for three of the different personality types. The subjects differed from Myers' adult population with regard to the perception-judgment variable where 9.5 percent of the older adults were "perceiving types" compared to 50 percent in the Myers' study.

Educational Participation

The data collected from the Abbreviated Leisure Activities Survey approximated a normal distribution. The mean educational participation score for older adults was 104.32 (maximum score was 355). Scores ranged from 27-214. The older adult subjects were all involved in learning activities at least to some degree, indicating the need for continued educational programming for older adults.

The older adults appeared to be more involved in learning activities such as informative programs on TV or radio, discussion meetings with others, and through use of printed materials than in organized group programs.

Personality Type and Educational Participation

The major goal of this research was to determine if there is a relationship between certain personality types and extent of participation of older adults in educational activities. Four null hypotheses were formulated for testing.

Null Hypothesis I: There is no significant relationship between the degree of extroversion and extent of participation in educational activities of older adults. Analysis of the Pearson correlation ($r = -.203$) revealed that extroversion was positively correlated with participation in educational participation at a level approaching significance ($p = .07$). This indicated that persons who were more extroverted tended to participate more in educational activities.

From a t-test, there was a significant difference between extroversion "types" and introversion "types" ($t = 2.15$; $p = .03$) which supported the Pearson correlation above. The t-test indicated that there was a significant relationship between degree of extroversion and extent of participation in educational activities.

Therefore, on the basis of these data, the null hypothesis was not accepted. Thus, the more extroverted person--one whose main interests are in the outer world of people and things--was more likely to participate to a greater extent in educational activities than the more introverted person whose main interests are in the inner world, who likes to be alone, and is likely to have limited relationships.

Null Hypothesis II: There is no significant relationship between the degree of intuition and extent of participation in educational activities of older adults. Analysis of the correlational data revealed that there was a significant relationship ($r = -.281$; $p = .02$) between the intuitive "type" and extent of participation in educational activities of older adults. This finding indicated that subjects who were more intuitive--persons who preferred to gather information through the intuition which shows meanings, relationships, and possibilities--tended to participate to a greater extent in educational activities than did the sensing "types".

The t-test analysis on mean scores of the intuitive and sensing "types" found no significant difference ($t = 1.06$; $p = .29$) between the two types in terms of participation in educational activities. The difference between the correlation and t-test can be explained by the shape of the distribution.

When the intuition-sensing variable was split at the median for the t-test, the data in each group were influenced by the extreme scores, resulting in a larger difference in the means and standard deviations within the groups than between the two groups.

Therefore, on the basis of these data, the null hypothesis was not accepted. It appears that the more intuitive personality type tends to participate to a greater extent in education than the sensing type.

Null Hypothesis III: There is no significant relationship between the degree of feeling scores and extent of participation in educational activities of older adults. Analysis of the data revealed no significant relationship between the feeling scores of older adults and their extent of participation in educational activities ($r = .056$; p .34). The t-test also revealed no significant difference between the feeling and thinking types in their educational participation scores ($t = .07$; $p = .94$). The null hypothesis was accepted.

Null Hypothesis IV: There is no significant relationship between the degree of perception scores and extent of participation in educational activities of older adults. Analysis of the data revealed no significant relationship between the perception scores of older adults and their extent of participation in educational activities ($r = .093$; $p = .25$). The t-test also revealed no significant difference between the perception and judgement types in their educational participation scores ($t = .53$; $p = .60$). The null hypothesis was accepted.

In summary, all older adult subjects were involved in learning activities to some degree. This finding supports Litchfield's statement that "There no longer appears to be any validity in the belief...that there are participants and nonparticipants in adult education. All men and women partake of adult education to some extent" (Litchfield, 1965, 19).

As this study did not involve a random sample from the older adult population, it is not possible to estimate the representativeness of the findings to the entire older adult population. However, it does appear, at least for these 52 respondents, that there is a relationship between certain personality types and extent of participation in educational activities by older adults, and that there may be a pattern of the kinds of

educational activities in which older adults are involved.

DISCUSSION

Implications

The author believes an understanding of personality type theory is potentially valuable in designing education programs and appealing to the motivations of older adults to participate in them.

Adult education programs will assume more importance than ever before as present changes in our society continue to provide an increased amount of leisure time available to people. Educational activities will have to be directed toward all personality types to provide a balance of leisure activities which appeal to all different "types" of persons.

For the teacher of adults and the program administrator as well, knowledge about participation patterns in education programs and personality types might be meaningfully related to help improve the quality of the learning experiences, develop a balanced curriculum, and maintain student interest and attendance. Such knowledge might also be useful for counseling and guidance purposes, as well. An understanding of people's type could be very helpful in counseling them in choosing careers and post-retirement occupations which would give them an opportunity to use their preferred processes. For example, sensing types are drawn to occupations that let them deal with a constant stream of facts, whereas intuitives like situations in which they look at possibilities, etc.

Finally, an understanding of personality type theory might be useful in working with people, not only in assessing needs and interests more accurately, but in being attuned to the strengths and differences of other staff and older adults. An acceptance of others as they are and not attempting to change the way they look at things and the way they make decisions can enable an acceptance of these unique differences to emerge.

Conclusion

General attitudes about learning ability of the older adult and the lack of participation by older adults continues to be of concern to adult educators. Heisel summarized his study of disadvantaged older adults with strong sentiments:

> ...The majority of older adults are educationally, socially, and financially disadvantaged...More attention will have to be paid to disadvantaged, older adults--the poor, the minority elderly... We have to know more about them; we must make adult education one of the vehicles through which they can be brought back into the mainstream of society... (Heisel, 1980, 135).

Educators must continue to seek new and better answers if programs for older adults are to be successful.

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Characteristics of the Eight Personality Type Variables

(75%)
Extravert

1. sociability
2. interaction
3. external
4. interest in external events
5. many relationships
6. likes to keep busy

(25%)
Introvert

1. concentration
2. internal
3. depth
4. intensive
5. limited relationships
6. interest in internal
7. likes solitude or to be alone

(50%)
Thinking

1. Chooses impersonal basis to make decision.
2. Impersonal, objective.
3. Rule governed, intellectual.
4. Objective.
5. Good at arguement, logical

(50%)
Feeling

1. Chooses on personal basis.
2. Emotional, values extenuating circumstances.
3. Gets emotionally involved in decision.
4. Is it good or bad?
5. Subjective.
6. Humane
7. Good at persuasion
8. Emotional appeal
9. Makes choices on impact on people around him

(75%)
Sensation
Conscious

1. practical, likes facts, trusts facts, remembers facts
2. believes in experience the past ("its worked before")
3. earthbound, grounded in reality
4. interested in the actural & wants to deal with that
5. accurate, observe details, tunes into closely to surroundings
6. Sometimes gets lost in details, does not see whole
7. gets things done in person

(25%)
Intuition
Unconscious

1. daydreams, interested in fantasy, poetry, imagery
2. often excited by the possibilities in a situation
3. future oriented
4. see the whole picture often
5. uses vision, intution, hunches to decide
6. "Head in clouds", does pay attention to detail
7. listen to inner voice
8. Often restless and dissatisfied always seeing possibilities
9. Often bothered by reality
10. Skips from one activity to next not completing-idea person

(50%)
Judging
Concluding

1. Prefers closure on decision sense of urgency to get decision make, feels at rest when decision make.
2. Has work ethic-comes first before all else. Planned, wrap it up, get show on the road. Prepares, maintains, cleans up. serious.
3. Will do what needs to be done to gain outcome
4. Task oriented, pressured, sometimes rigid, inflexible.
5. Decision making.

(75%)
Perceiving
becoming aware

1. Open & fluid indesive, flexible
2. Resists making final decision (need more data) Uneasy about making decisions
3. Deadlines ignored, often an alarm clock, plenty of time, no big deal, it'll get done.
4. Have a play, ethic, less serious
5. Process important. If not enjoyable, is not worth working towards goal

A Systems Analysis Model For Optimizing Learning Environments For Adult Learners

Riva Heft*
Concordia University

Chris Petersen**
American Institutes for Research

INTRODUCTION

Professionals working in a variety of contexts have traditionally relied upon two approaches to designing, developing and adapting learning environments: 1) evaluation and 2) needs assessment. Both of these approaches are similar in that they are based on identification and analysis of learner preferences or discrepancies between what exists and some defined standards. For the needs assessment approach the discrepancies revolve around where the learner is and where he wants or ought to be (ef. Kaufman, 1981; Knowles, 1970; Knox, 1968). The evaluation approach is preoccupied with similar discrepancies between learner or program performance and derived standards, but also includes the analysis of discrepancies between information needed and the information provided and used (cf. Larkins, 1974; Stufflebeam, 1971). While these approaches have yielded solutions in part, they do not account for input from various classes of decision makers, the decider subsystem (Miller, 1978), or from the environment of the learning system.

In contrast to the limitations of the more traditional approaches of needs assessment and evaluation, system analysis represents a viable alternative with several distinct advantages. Systems analysis offers a method capable of 1) simultaneously examining multiple facets of the learning environment, 2) synthesizing multiple sources of information from multiple levels of the decider subsystem, and 3) analyzing the interface of multiple decider subsystems in terms of their interdependence in order to identify or develop adaptive structures with which to optimize the learning environment.

The purpose of this research was to develop a systems analysis model which would expand the information analysis from one to three levels of the decider subsystem, thereby taking into account more than just learner's preferences or discrepancies between what is needed and what is available. In general, the problem addressed was the design

* Rm. 549, Department of Education, Concordia University, 1455 DeMaisonneuve, Montreal, Que. H3G1M8

** 1641 Sumner, Suite 3, Lincoln, NE 68502

of a model capable of assisting decision makers in identifying optimum learning environments for individual or groups of adult learners. The goal was to design a systems analysis model which would, on the basis of easily obtainable data (eg. questionnaire or interview), evaluate the maximum utility of a learning environment based on learner preferences, administrative constraints, as well as expert opinion regarding factors influencing implementation.

CONCEPTUAL FRAMEWORK

According to Ackoff & Sasieni (1968), the underlying structures of operations research and systems analysis models can be summarized by the following equation: $U = f(X,Y)$ where,

U = the utility or value of an outcome
X = the variables of the environment that can be controlled
Y = the variables and constraints that are uncontrollable but affect U
f = the relationship between U, X, and Y

"The task of the operational research worker is to forecast the general trend of the variables, Y, which are the state-of-nature variables and from an analysis of the functional relationship of these uncontrollables, deduce how the particular set of controllable variables X should be selected to optimize the attainment of the objectives on the left-hand side." (Rivett, 1968:30).

Thierauf & Grosse (1970) in discussing the application of this equation, state: "The extraction of a solution from such a model consists in determining the value of the control variable, X, for which the measure of effectiveness is maximized." In maximizing or optimizing the measure of effectiveness or performance of a system the problem is to find the best decision among many alternatives. For this type of decision-making a criterion is required. According to Thierauf & Grosse the criterion will be the course of action that will produce the highest profit to the client. This profit may be measured in terms of dollars, increased production, or preferences. It can also be measured in terms of minimizing some value, for example lost opportunities (Ackoff & Sasieni, 1968).

The problem at hand was to design a system analysis model based on the equation $U = f(X,Y)$ and determine if such a model had the capability of aiding decision-making regarding the utility of adult-appropriate learning environments. Additional criteria for developing the systems analysis model were the requirements that the model be flexible enough to accomodate a variety of audiences, while at the same time be capable of incorporating multiple criteria of preferences, cost, number of lost opportunities, and implementation constraints. In essence, the task was to operationalize the systems analysis model such that is would be possible for a given learning environment to ascertain Y and then to select X in order to maximize U, where, in this case U is

the utility of alternative learning environments, X is the action choices or the components of an instructional delivery system and Y is: a) the preferences and characteristics of the learners, and b) the importance factor as determined by the experts, and c) the constraints on the administration.

In order to ascertain Y it is necessary to obtain data from the levels of the decider subsystem regarding the potential action choices or controllable components constituting the instructional environment (X). Therefore, the first major step in developing questionnaires to collect Y data was to conceptually identify major categories of action choices. Frank's (1971) work was used as a basis for delineating six major categories of controllable (X) variables in a learning environment: 1) goals, 2) content, 3) medium, 4) algorithms or procedures, 5) sociostructure (environment), and 6) psychostructure (cognitive styles). These six constructs were expanded to thirteen types of action choices and operationalized into 67 controllable variables of the learning environment based on definitions and descriptions found in the literature (Boyd, 1976; Harrison & Stolurow, 1973; Gagne and Briggs, 1974; Holden, 1975; Mehrens & Lehmann, 1973; Romiszowski, 1974). While certainly not exhaustive, these 67 controllable variables represent a comprehensive array of alternatives for the X portion of the general systems analysis equation. It should be noted, however, that these variables grouped under Frank's constructs were designed primarily for a post-secondary formal educational institution. Depending upon the audience using this model, these variables can be modified, completely changed, or utilized per se. The model was designed to accept any construct for pedagogical problem-solving. Selection of these constructs should, however, reflect the nature of the education/training situation and the sophistication of the audience of learners, administrators and experts. Frank's six major constructs establishes sound pedagogical parameters within which modification can take place.

The controllable variables (X) catagorized by Frank's six constructs were then used as a common basis in the design of three separate questionnaires targeted at three different levels of the decider subsystem: learner, teacher/expert, administrator. While the learning environment variables were the same for all three questionnaires, the criteria for ascertaining Y variables varied with the class of decision-maker. For the student population, the criterion variables are simply the degree of preference and range from highly desirable to highly undesirable on a 5 point rating scale. Criterion variables for the teachers/experts were derived from those delineated at a symposium sponsored jointly by the United States Office of Education and the National Institute of Education, 1973 (Harrison & Stolurow, 1973). These are: 1) grouped and bounded, 2) individualized and bounded and 3) personalized and open. A fourth expert criterion, the workplace, was added since business and industry have become more cognizant of their responsibility to upgrade and retrain their own personnel and the efficiency of doing so on location.

The criteria for ascertaining the uncontrollable Y variables for the administrators consisted of the constraints managers, administrators and planners must consider before implementing programmes. The concepts outlined as constraints to the implementation of programmes by Van Gigch and Hill (1971) were reviewed with a front-line administrator at a local college in Montreal to determine their validity for that institution and institutions of a similar nature. No discrepancies were found between what the literature identified as constraints and what practitioners were experiencing as constraints. Therefore, these general concepts were operationalized into four major categories: 1) capital costs, 2) operating costs, 3) union collective agreement, and 4) boundaries of the mandate of the administration.

METHOD

Although the conceptual development of the systems analysis model was the major focus of this research, a principle objective was to field test the model in an applied context to operationally determine the appropriateness and efficacy of application. This section will consisely summarize how the three forms of questionnaire were utilized to analyze a particular adult learning environment. Figure 1 summarizes the data path, equations, and model structure.

Subjects. The student subjects used in this study were registered in the Adult Learners Programme at John Abbott College, Ste. Anne de Bellevue, Quebec. Of the 83 students in the programme, 65 received questionnaires; 43 were completed and returned. All respondents were female. Teachers in the Adult Learners Programme at the same college, and faculty in the Educational Technology Programme, Concordia University, Montreal, served as respondents for the teachers/experts form. Of the 8 questionnaires distributed, 5 were completed and returned. Four administrators at the above mentioned college served as respondents for the administrator's Form. Respondents included the Academic Dean and the Director of Continuing Education under whose aegis the Adult Learners Programme falls.

Procedures. For demonstration purposes, data from the three forms of questionnaires distributed to the three subject groups were utilized as a field test of the systems analysis model depicted in Figure I. For functional utility a Likert-type scale was employed with different types of symbols assigned to terms for each questionnaire. These symbols thereby permitted assignment of numerical values so that the data could be utilized as input for the model. The numerical values were arbitrarily chosen, although the two outside limits represent the maximum and minimum values which the subjects could assign to a particular action choice. Values on all scales ranged from +5 to -5 with intermediate values of +3 and -3, and neutral values of 1. It is recognized that the intermediate values of +3 and -3 are not equidistant intervals. If the audience utilizing the model was sophisticated enough and if accuracy was an important enough factor this model could be implemented with a broader range of weighting factors. Subjects could assign any value between +100 and -100, for example, and the model would accept these values.

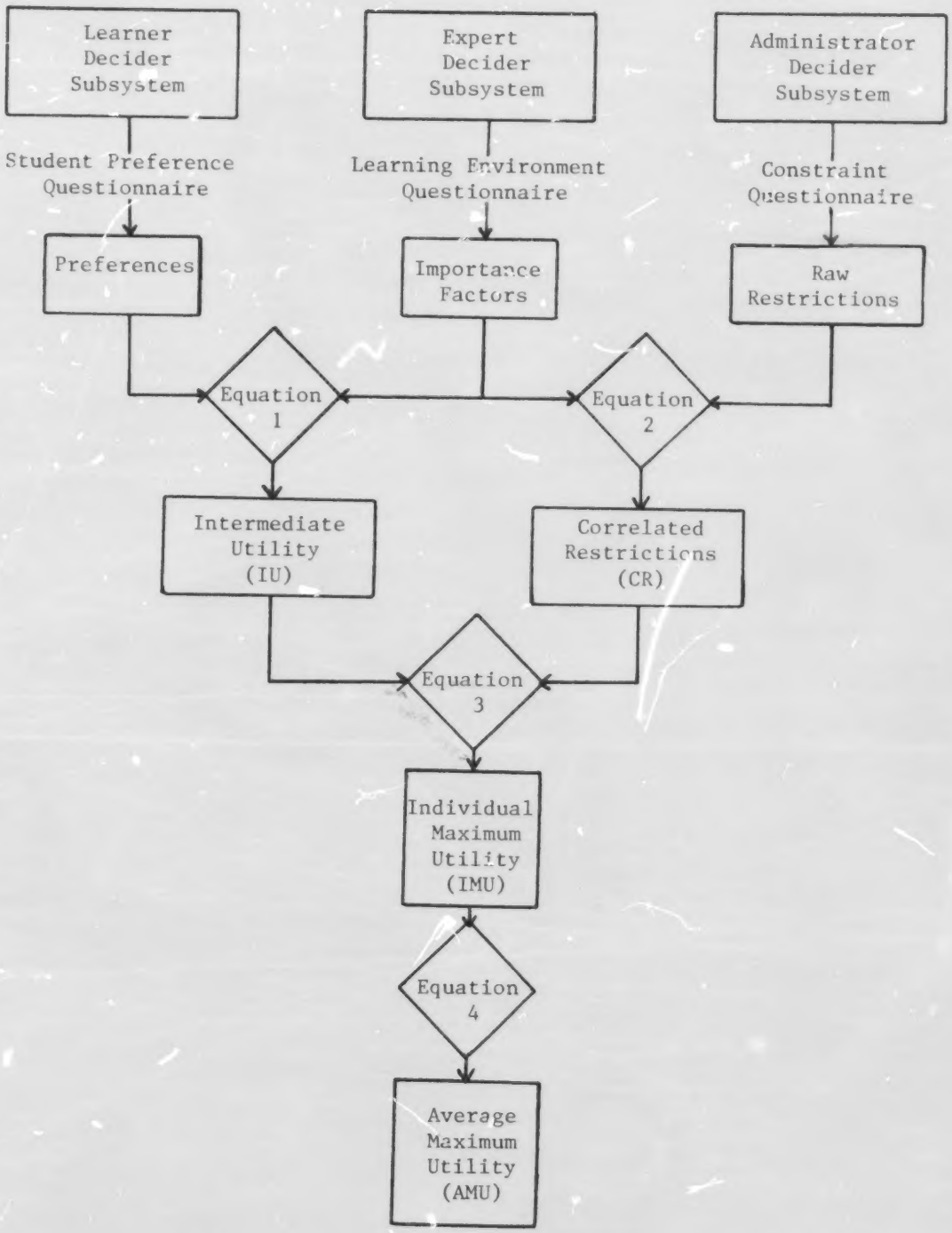

Figure 1. Data Path, Equations, and Model Structure

Negative values were assigned because of the way in which the mathematics of the model handles the sign conventions. If a student rates an action choice as undesirable, a negative value, and the experts rate that action choice as incompatible with an outcome, also a negative value, that is viewed positively. For example, if a learning environment absolutely excludes the use of computers, and a student has an aversion to using a computer, that increases the utility of that learning environment for that particular student. Restrictions will always decrease the utility. The maximum utility was obtained by simply subtracting the correlated restrictions from the intermediate utility. Again, for demonstration purposes a simple subtraction was performed. However, should the data be sufficiently sophisticated, a weighting factor (wf) could be introduced by, for example, subtracting one half the value of the correlated restrictions from the intermediate utility.

In order to efficiently analyze the data from the three questionnaires, it was necessary to develop a Fortran computer program based on the systems analysis model depicted in Figure 1. The computer program produces three types of utility values to assist decision making: 1) an Intermediate Utility (IU) based on data from students and teacher/experts, 2) an Individualized Maximum Utility (IMU) for each learning environment for each student after administrative constraints have been superimposed, and 3) an Average Maximum Utility (AMU) for the total student population polled for each learning environment. Scope and space of this condensed report do not permit detailed reports of results (Sample portions of analyses and results may be requested from first author).

DISCUSSION

The purpose of this study was to develop a systems analysis model capable of assisting decision makers in identifying optimum learning environments for individual or groups of adult learners. For the data obtained and analyzed through the field test, the model appears to have met both of these criteria. At the program level, the AMU values allow decision makers to identify and prioritize learning environments, and components thereof, with regard to maximum utility for a given situation and target group. In addition, the system analysis model also produces IU and IMU values which permit individual learner analyses, thereby enabling individualized feedback and counseling with regard to the match of particular learning environment components with individual learner traits and styles.

The systems analysis model appears to be a viable alternative to evaluation and needs assessment approaches to educational decision making. The systems analysis model is especially attractive because of its capacity to simultaneously analyze multiple sources of information from several levels of decision makers and to then synthesize this vast array of data into meaningful aggregates for decision making. As a conceptual model and a methodological tool, systems analysis also offers the flexibility and adaptability for use across learning environments. For example, industry could easily plug in content variables which are industry specific. Similarly, considerations for managers and administrators could be reflected in an appropriate manner by using other constraints criteria critical to their own circumstances. These adaptations and subsequent implications must ultimately be verified in subsequent research.

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The authors would like to gratefully acknowledge the assistance of Robert Alan Heft in the development of the mathematical structures and the Fortran computer program.

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THE ELDERLY LEARNER: A NATURALISTIC INQUIRY

Roger Hiemstra
230 Huntington Hall
Syracuse University
syracuse, NY 13210

Introduction

Today's fastest growing minority cohort in the U.S. is the older adult. A current 23 million plus individuals are over 64 and the number is growing by about 1000 people daily. Some demographers even predict up to half of the population will be 50 or older in about 25 years (Peterson, 1976).

Although many negative stereotypes regarding aging exist, more recent research has challenged some of the views about learning ability. Much of the current literature about older adults as learners is very positive in nature with only a slow decline in intelligence with age reported (Jones, 1979). Once intelligence test speed factors are removed, intelligence change does not appear age related (Bolton, 1978). It appears that later life intelligence is best characterized by plasticity and flexibility rather than universal decline (Labouvie-Vief, 1976).

Older adults also appear to exercise this intelligence quite extensively. For example, one study found that older adults typically spend 300 or more hours annually in learning projects (Hiemstra, 1975, 1976). Ralston (1978, 1981) found that even when older adults were divided fairly equally by race, sex, and socioeconomic status, they spent about 250 hours a year in learning activities.

Thus, much is known about older adults as learners. However, little is known about what constitutes "success" in being a lifelong learner. The primary objective of this research project was to study several older persons reputed to be highly successful learners in their naturalistic settings and determine if there were common characteristics among them that might begin to explain success or learning activity. Determining such characteristics should enable adult educators and others to better plan educational programs, resources, and approaches.

Methodology

This research began in 1975 when I embarked on a long-term case study of several older learners. Although I had previously and have since carried out quantitative studies through questionnaire or interview approaches, I decided to employ a different approach, one that would not only provide some descriptive information but also one that would provide some explanation of any key qualitative factors related to success as an older learner.

Thus, "grounded theory," was chosen as the conceptual model (Glaser and Strauss, 1967; Mezirow, 1971; Mezirow, Darkenwald, and Knox, 1975; Darkenwald, 1980). The grounded theory model is inductive in nature and utilizes both interview and participant

observation techniques in natural settings to build theory grounded on the data rather than testing existing theory or describing empirical phenomena. The model involves comparative analyses to determine some generalizable explanations for the social phenomena being studied. The researcher goes to the subjects to gather and look at information with a minimum of predetermined theoretical expectations. Similarities and differences among the subjects are sought until several conceptual categories emerge.

In deciding to employ the grounded theory model, I also committed myself to beginning a long-term study of older adult learners. I asked several adult education and gerontology professionals to identify people who they deemed to be successful older learners and likely to be willing to participate in a study. I wanted individuals thought to be successful but I resisted providing any specific criteria like high amounts of formal education, current activity in learning, etc. As a matter of fact, I was interested to see how other people would interpret "success" in terms of older learners.

A long list of potential subjects quickly resulted in the permission by 30 individuals for future interviewing. Initial case study data were obtained over a two month period through interviews, participant observations, and good listening skills. The interviewing followed an unstructured format where probing and open-ended questions were used. Subsequent visits, letters, questionnaires, and phone calls over the past six years have provided considerable data.

Two trained coders working independent of each other and of me at separate time frames have been employed to cross-check and verify the meanings and interpretations of categories, themes, and emerging hypotheses. In addition, two other colleagues have dialogued with me on the data, the categories, and the meanings of any important findings. To date, the data have yielded several categories, themes, or conceptual elements. Emerging is a beginning understanding of success and increased knowledge regarding the importance of several personal characteristics or the heritage one is given in life. However, a clear explanation of all relevant properties and a well integrated set of theoretical propositions still remain to be developed. Thus, the study goes on. What is presented is a report of my understanding and thinking to date.

Findings

If a composite picture of the subjects can be drawn, the typical female subject (18) was in her seventies, of average income, living in her own home with her spouse, a college graduate, and had taught school as her main source of income. No female percived that home making was her primary role in life. The typical male was very similar except that although teaching still was noted often, professional backgrounds were varied. Thus, highly educated subjects, many with connections in some way to teaching, made up the bulk of the subjects.

Several major themes emerged. One such theme centered around personal health. I eventually arrived at ten distinct categories I

believe to be representative of this personal health concept: Energy level, vision, hearing, mobility, physical health, mental health, level of relaxation, enjoyment of life, enjoyment of self, and personal grooming. What appeared common among the subjects was high mental alertness, a fairly high level of relaxation, good grooming habits, and a general enjoyment of life. Although the above may not appear too surprising in terms of common sense assessment, what was surprising to me was the fact that there were lots of differences on factors such as hearing ability, overall physical health, and mobility, but not to the detriment of learning interests or activity.

Another theme centered around the intensity of personal involvement in learning. Several sub-categories seemed to emerge: Reading level, world travel involvement, interest in world affairs, interest in expressive activity, and active study persuits. It appeared that subjects generally were active readers, were actively engaged in study projects, and were carrying out a wide variety of learning endeavors. On the other hand there were not commonalities in terms of travel, interest in world affairs, or interest in expressive activities. A related finding was that almost all subjects believe that their parents had stressed the importance of reading in the home when they were growing up.

A very interesting finding was the fact that all subjects had attended some college, with nearly three-fourths college graduated or beyond. Most, too, had been involved in people oriented occupations, with one-half involved in teaching. Many of the subjects' parents also were well educated and had served in professional or teaching roles.

As has been shown in many other studies, birth order appeared to be an important commonality. Fourteen of the 30 individuals were first borns and another four were an "only" child. An additional three were born considerably later than their nearest sibling and they felt in many ways they were treated somewhat like an only child or a first born.

Related to the above may be some of the personal feelings about self, individuality, or self-discipline. When asked to describe what their primary purpose in life and their personal philosophies evolved around, 24 out of the 30 believed that "self" was the most important cornerstone in one or both of the categories. "I have a lot of stick-to-it, a lot of perserverance," "If you picture yourself as a failure, you will be a failure; so therefore picture yourself as a success," "I am pretty self-sufficient," are some of the related types of comments.

I also was amazed by the heavy involvement of many subjects in active writing projects. Several had published books and professioal articles, were writing poetry, researching for a geneology write-up, and-or planning for future writing activity. Nineteen out of the 30 reported such writing endeavors.

Each person also was asked if they viewed themselves as successful as an older adult learner. Almost every person thought of himself or herself as successful and did not hesitate in stating why they believed themself to be different from many older persons. Most spoke of things like staying active, being curious, self-reliance, and the influence of parents. Many spoke of what

differentiates them in terms of an inner resource they had. It was felt that a lifetime of experiences builds an inner strength or resource which seems to act as an energy force in time of stress or concern.

Discussion

The greatest benefit of this research has been what I have learned about myself and what I want to change in order to be like many of the successful older adults studied. I think, too, there are some messages for adult educators in terms of helping people become successful older learners. Obviously, we can't facilitate everyone being a first born, but we can help with reading skills, reading interests, and personal curiousity, can promote learning activity, and can facilitate the development of self-directed skills. I also know that as a parent I have had reinforced the knowledge of the important role I play in guiding my young children toward a lifetime of learning success.

How well these tentative themes can be generalized to other older adults is unknown. Obviously, the people I studied are the very ones that make most use of the services, programs, and resources provided by adult educators. The real challenge the research raises is how are we to reach those without the characteristics of the subjects studied. I suspect that most of what we do now as adult educators is reach those that are already successful as learners or, at most, help some less successful learners cope with immediate problems. Perhaps we need to move toward providing for future learning success by building today, foundations for learning in terms of learning skill development, creation of excellent learning resources, and enhancing positive attitudes about "self" as learners. We now have a better perspective on success in the later years in terms of learning. Are there not ways that we can use such information to help people in their 30's, 40's, and 50's build toward a higher quality of life in later years.

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IDEALS AND REALITY IN COMPETENCE GIVING ADULT EDUCATION: SOME RESULTS FROM SWEDISH MUNICIPAL ADULT EDUCATION

Robert Hoghielm
Stockholm Institute of Education*

BACKGROUND

Introduction

Adult education accounts for a considerable share of the Swedish government budget despite recently announced cuts (2%). More than one-tenth of the national outlays for education goes to the various types of adult education. On top of that, an equal amount is spent on advancing allowances to students enrolled in labor market training, which is entirely government-financed.

Swedish Municipal Adult Schools

The municipal adult schools are operated by the school boards of each local authority. They offer instruction in accordance with the uniform national curricula for the lower secondary school level (grades 7-9) and for the various study lines and courses in upper secondary (2-4 years beginning with grade 10). However, compared with youth education, the normal time schedules for adults imply a reduction of between 30 and 70 per cent.

Many courses are offered in the evening. However, eligiblity for leave of absence as from 1975 and for special adult study allowance as from 1976 has increased the proportion of daytime students. During the autumn of 1979 daytime students constituted half of all students (19 500 of 39 263 students at lower secondary school level). 67 per cent of all participants in all courses in municipal adult education were women. The student takes one, two or more subjects at a time; most students study part-time, but many daytime students attend full-time. Instruction is free of charge but students may often be required to pay for their own study materials.

General Purpose of Presented Study

Most research work in adult education has to a limited extent dealt with the process of instruction. However, there have been many advocates of adult education who have claimed how special the teaching process is in adult education. One general objective for the present study has been to map the teaching process in Swedish Municipal Adult Education. The result will be a better understanding of what happens in the situation of instruction and also facilitate prevention of unnecessary dropouts.

IDEALS IN ADULT EDUCATION

The well-known work of Eduard Lindeman, although written fifty years ago, seems relevant to many concerns of present day adult educators (Lindeman, first published 1926). His emphasis on individual needs and experiences as a starting point in adult education is still very much up to date. His suggestions to

* Box 34103, S-100 26 Stockholm, Sweden

prefer discussion techniques for problem solving and his thoughts about "power," "freedom," "self-expression" and "Specialism" seem remarkably contemporary. Other agents of adult education, e.g. Knowles (1972), have pushed the individual aspect further, stressing individual development apart from external concerns. Knowles strongly argues for the conception andragogy indicating that teaching adults is quite different from teaching youngsters. The adults have, e.g., more life experience which the instructor must adjust to the educational situation.

The new curriculum for Swedish Municipal Adult Education expressed by a Bill (1980/81:203) can be viewed as an example of Lindeman's ideals. The following passages can be cited:

> ..."An important objective for Municipal Adult Education is to help to minimize educational inequalities in society."....."Adults' own experiences from work places and everyday life in society are regarded by many citizens as no true knowledge.....But many adults have acquired a great deal of knowledges and experience by often being forced to solve concrete tasks or sudden problems, sometimes after several efforts. Therefore the instructional process in adult education must have its starting point there, namely to use all the knowledge, experience, attitudes and values which the participants possess when they first come to adult education."

To summarize: the curriculum for municipal adult education expressed by a governmental Bill stresses the participants' independence and need of their own planning based on their own experience, i.e. a plea for problem-oriented instead of subject-oriented education.

This article will discuss if it is possible to take such a viewpoint in competence-giving adult education. Furthermore if this is the case does it mean that the teaching process in competence-giving education has another "pattern" than that in youth education.

In the following passages the author will give a short presentation of a theoretical framework and some empirical findings based on a five-year project carried out in municipal adult education which has been partly concerned with the teaching process. The material has also been analyzed in such a way as to permit comparisons with youth education.

THEORETICAL CONSIDERATIONS

Society's norms and values are reflected in the educational process. Adult education cannot be treated as a special phenomenon isolated from the surrounding society. Political aspirations and conditions for adult education are transformed via a bureaucratic organization into a framework.

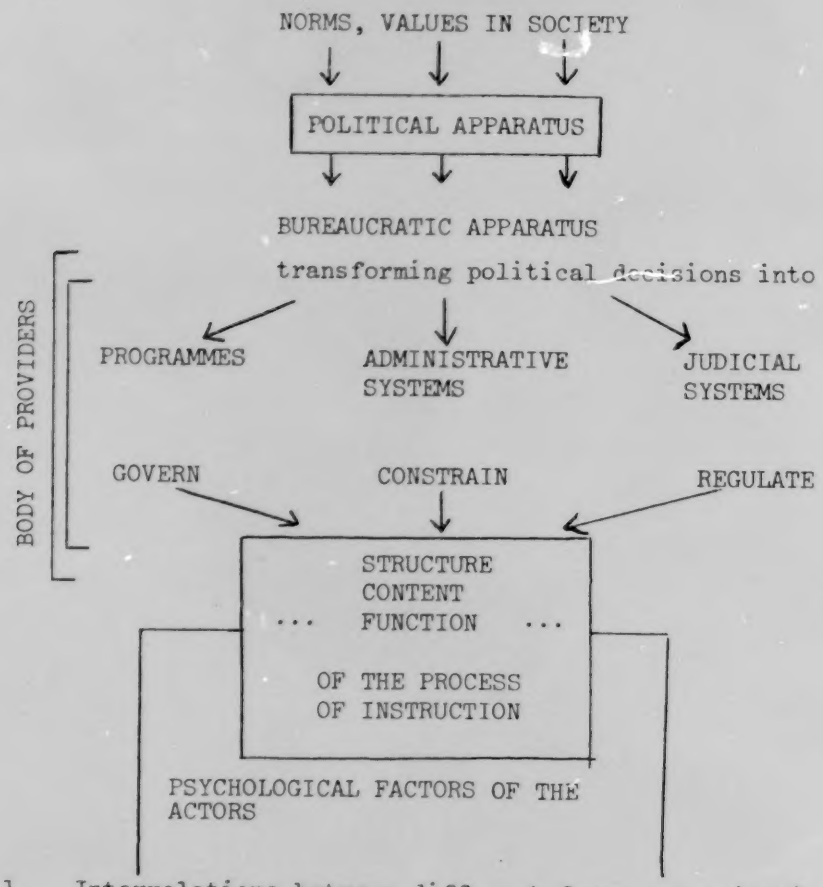

Figure 1. Interrelations between different frames constituting the process of instruction.

Programmes are expressed through a goal system (e.g. syllabus, textbooks, teaching materials) which governs the educational situation. Correspondingly, the administrative system (constitutional, organizational and physical) constrains the activity and a judicial system regulates the conditions by certain formal rules (conditions for teacher's employment, number of tutoring hours weekly, obligations to give marks). The relations between these three systems are shown in Fig. 1. The instructors' and participants' conceptions of the different components of the framework have a significant impact on how the teaching process will appear.

These three systems are used only as guides to understanding the conditions in which the "actors" in the process of instruction operate. It is necessary to combine quantitative and qualitative data when trying to make an evaluation of how adult education operates where the teaching process is an important part. Research in this area cannot be confined to traditional micro-studies of the psychology of learning or to short-term studies of classroom behaviour, be it classroom interaction or evaluation studies of instructional programmes. Others have argued for that point of view, see, e.g., Lundgren, 1977. This of course does not exclude psychological factors in favour of factors emanating from the society. On the contrary, they must be combined.

The results presented in this paper are based on an empirical study which consists of one intensive part which involves 9 classes in Swedish and 9 in mathematics. The study has used classroom observations (240 lessons), tape-recordings (30 lessons), questionnaires and interviews administered to both participants and teachers. Another part of the study, the extensive one, deals with more general questions such as the objectives of adult education and the provision and content of local training programs for instructors.

RESULTS FROM TAPE RECORDED LESSONS

Analyses Based on Bellack's System

Whereas attempts to study what goes on inside classrooms date back to the early part of this century, it is only in the past twenty years that classroom research has begun to establish itself as a distinctive area of educational research. During the 1960's a number of studies were reported involving the systematic observation of the processes of classroom interaction. The present study has used an observation system created by Bellack and his co-workers. By using such a system it has also been possible to make comparisons with results from youth education. The following table (1) shows the relative differences between teaching in youth education and municipal adult education. Lundgren (1972), Kilborn (1976) and Gustafsson (1977) have used Bellack's system when analysing classroom studies carried out by them in Swedish youth education. Bellack's method means that lessons are taped and afterwards are typed, whereupon the written materials are analyzed. The contributions from the "actors" are analysed with reference to structuring (STR), i.e., presenting facts or lecturing,soliciting (SOL), responding (RES) and reacting (REA), i.e., to make an evaluation of answers.

Bellack names each classified contribution a move. In Table 1 a comparison is possible to make between the relative amount of moves in youth education and competence-giving adult education. The table can be interpreted as follows. In youth education the major teaching pattern of the teachers means a stress on soliciting activities. In consequence the students have to respond/answer the questions. The pattern can be viewed as a strategy of the teachers to check and cope with students to keep them busy (see, e.g., Abrahamson & Westbury, 1974). In adult education the situation is quite different. The picture is dominated by an overwhelming teacher structuring activity. But there are also a number of participants who are very active in structuring (24% STR) by comparison with the youngsters (generally zero). Hoghielm (1980) has shown that there is a very small proportion of the participants who are active in the classes. (15-20% in each class are responsible for more than 70% of all participants' contributions.) Those groups are the pace groups, who set the pace in each class and whom the instructors will adjust.

Table 1. Moves in per cent divided between teachers' (T) and participants' (P), different educational levels (Bellack's system)

			STR	SOL	RES	REA	ISO[1]	Number of moves	Total
YOUTH EDUCATION COMPULSORY SECONDARY	Bellack et al (1966)	T	8	46	6	40	1	9565	15457
		P	2	11	65	15	6	5910	
	Lundgren (1972)	T	16	41	5	34	0[2]	7051	11387
		P	1	10	61	28	0	4336	
	Kilborn (1975)	T	18	43	6	33	0	3295	5098
		P	0	20	60	15	5	1803	
	Gustafsson (1977)	T	17	45	7	29	0	4496	7577
		P	1	21	46	26	6	3081	
MUNICIPAL ADULT EDUCATION	Intensive study (1979) M[3]	T	42	28	3	27	0	4724	7440
		P	14	16	36	34	1	2716	
	S[3]	T	37	29	6	27	1	2483	4081
		P	24	15	40	20	0	1603	

1) Impossible to interpret
2) Lundgren also has a HEP category (4 %) indicating individual help.
3) M = Mathematics, S = Swedish

It was also necessary to look at the sequences of the moves in order to map the pattern of the teaching process, i.e., how the teaching cycles appeared. In short, a teaching cycle can be seen as a certain sequence of pedagogical moves concerning the same issue. In Table 2 the six most frequent teaching cycles are presented in comparison with some results from youth education. Teachers in competence-giving municipal adult education concentrate on one type of cycle, a cycle which has only one move, STR. In mathematics STR and STR, REA cycles stand for 38 per cent of all cycles. They can be seen as an antipode to the most frequent cycles in Lundgren's mathematic study in youth education: SOL, RES and SOL, RES, REA which in Lundgren's study correspond to 38 per cent.

Table 2. The six most frequent cycles in percentage intensive study in comparison to youth education (Bellack's system)

Bellack (1966) (Civics)	%	Lundgren (1972) (Mathematics)	%	Intensive study (Mathematics)	%	(Swedish)	%
STR SOL RES REA	5.7	STR	6.9	STR	23.5	STR	17.1
SOL	9.7	STR SOL RES REA	5.5	STR REA	14.6	SOL RES REA	10.2
SOL RES	22.3	SOL	5.6	STR SOL RES REA	4.7	SOL RES	6.0
SOL RES REA	26.0	SOL RES	15.5	SOL RES REA	7.3	$SOL_p^{xx)}$ RES	4.4
SOL RES REA REA	9.0	SOL REA	6.7	SOL	4.9	$SOL_p^{xx)}$	4.3
SOL RES REA RES REA	7.0	SOL RES REA	22.3	SOL RES	4.6	$SOL_p^{xx)}$	3.2
	79.7		62.5		59.6		45.2

xx) Soliciting from participants.
In the intensive study solicited activities of participants were noted and separated in the analyses.

Thus activities in both youth education and municipal adult education are centered around structuring-initiated and soliciting-initiated cycles. Table 3 shows the relative amount of those two groups of cycles for the three different studies.

Table 3. The relative amount of different groups of cycles in the intensive study compared to youth education (Bellack's system)

	Bellack (Civics)	Lundgren (Mathematics)	Intensive study (Mathematics)	(Swedish)
STR-initiated	18.2	27.1	55.8	48.1
SOL-initiated	79.3	61.8	33.0	41.7
HEP-moves	-	7.6	-	-
Odd cycles	-	3.5	10.4	9.1
Not codable	2.5	-	0.8	1.1
	100.0	100.0	100.0	100.0

It can be noticed that in our intensive study there are a greater amount of so called odd cycles 10.4% in mathematics, 9.1% in Swedish. STR-initiated teaching cycles are quite dominant in our study. In general half of the cycles are STR-initiated.

Analyses Based Partly on Flanders' System

The results presented up to this point are based on a more limited time space and carried out from tape-recorded lessons. The intensive study also consists of classroom observations carried out during one year. As already mentioned 240 lessons were observed. The category system which was used is based to some extent on Flanders' observation system (Flanders, 1970).

These observations are of course not as accurate as those based on tape-recorded lessons. However, the results point in the same direction, namely to massive lecturing or structuring activities by the instructors. Both of these types of analysis have a heavy quantitative approach and give only restricted qualitative information. Therefore, the observers also noted what type of general activities were carried out in the classrooms.

General Activities in Classrooms

Intensive Study. The dominant picture of activities in the classrooms was examination and general lecturing which in the Swedish classes covered 50% of all observed time and in the mathematics classes 57%. At the same time only 32% is spent on group activity and discussions in Swedish and 4% in mathematics. The last extremely low figure can, however, to a certain extent, be explained by the structure of the subject.

Extensive Study. In the other part of the study - the extensive study - all teachers in 1978 in Sweden who had new classes in Swedish, English, mathematics, civics and science at lower secondary level were given questions about

how they normally "distributed" the classroom activities. 80-85% of all teachers answered the questionary.

Table 4 shows the relative extent to which group-work and discussions are practiced by teachers in municipal adult education.

Table 4. The relative amount of group work and discussions based on answers fro all teachers in municipal adult education, lower secondary school leve

		NO ANSWER	USED NO TIME	RELATIVE USED TIME 1-24 %	25-40 %	40 %	N
Group work	Math.	0	81	18	0	1	150
	Swedish	3	8	72	15	3	130
	English	3	29	62	5	3	133
	Civics	3	18	63	12	4	73
	Science	0	26	44	22	7	54
Discussions	Math.	0	31	68	1	1	151
	Swedish	3	7	72	16	2	130
	English	3	14	81	2	1	133
	Civics	3	4	60	29	4	73
	Science	0	11	85	0	4	54

Table 4 clearly indicates that group-work and discussions are relatively unusual activities in the classes. Correspondingly the figures show an opposite picture when looking at how much time of the lessons usually is spent on general lecturing. 40 per cent of the teachers say that they use 25-40% of the time for lecturing. Furthermore, if this figure is compiled with time spent on examination and tasks directed by the teachers, more than 50 per cent of the time is dominated by the instructor. Obviously the participants have little chance of "consuming" the lesson time on their own terms. This statement is corroborated by the following table (5), showing the relative number of the teachers organizing situations for planning together with the participants.

Table 5. The relative amount of organized planning with instructors and participants planning together.

	NO ANSWER	YES	NO	N
Math.	3	18	79	151
Swedish	10	38	52	130
English	2	32	66	133
Civics	0	37	63	73
Science	4	20	76	54

It is perhaps surprising that so many of the teachers in civics say that they never do any special planning together with the participants - if considering the essence of the subject.

An important question in this connection will be the actors' opinions about the objectives of municipal adult education. Table 6 shows differences in opinion between principals, teachers and participants about the major objectives of Swedish municipal adult education.

Table 6. First objective chosen for municipal adult education. Relative comparison between instructors, principals and participants.[x)]

	Knowledge for continuing studies	Knowledge to cope with everyday situations	Knowledge to be used in vocational life	Raise general level of knowledge	N
Instructors					
Math.	44	17	14	14	151
Swedish	26	35	18	13	130
English	35	25	20	13	133
Civics	32	11	18	30	73
Science	31	19	15	33	54
Principals	43	16	25	16	234
Participants					
Swedish	36	4	20	13	125
Math.	39	2	24	10	146

x)"No answer" not presented due to limited space.

From Table 6 it can be observed that knowledge for continuing studies is the most usual answer. Especially the participants favour that objective, while the instructors' opinions vary.

DISCUSSIONS AND CONCLUDING REMARKS

The results presented in this paper showed that teachers in Swedish municipal adult education prefer using the lecturing technique. This is not in accordance with the ideals the agents of adult education argue for, viz experience-oriented instruction which e.g. is in the spirit of Lindeman's Dewey-influenced ideas. From Tables 2 and 3 it can be observed that the whole interaction pattern in adult education is quite different in youth education. The latter is characterized by a recitation pattern. The teacher's role is to govern the teaching process by solicitng moves and evaluating the pupils' answers. The pupils have only the role of answering. From the material presented, it can be inferred that the major pattern in youth education consists of chains of soliciting, responding and reacting, less often started by a structuring move. In municipal adult education another pattern is dominant, characterized by reception. The teacher's role is to reproduce facts, and the most frequent pedagogical sequences therefore start with a structuring move. There are also some differences between the subjects. In Swedish the participants are more active than in mathematics. However, the general picture is the same in both mathematics and mother tongue. In Table 1, it can be observed that there are a number of adult participants who make structuring contributions, i.e. information and facts. This pattern is more distinct in Swedish than in mathematics. Registered information from the lessons reveals that the instructors do not permit these contributions to alter their lecturing performances.

The general question is, as the results indicate, why the participants "let" the teachers become "living books." It may be possible to explain our results with reference to Fig. 1. The framework in both adult education and youth education makes it difficult for the "actors" to behave differently. Dahllof's (see e.g., 1971) explanation of the teaching process as steered by a certain group of pupils can be seen as an expression of different interrelations

between frame factors. Our Fig. 1. implies such assumptions and the actors' behaviour must be seen as a consequence of the relations between these factors. The teacher's interpretation of the framework has of course a significant impact on what type of teaching strategy he chooses. If the teacher believes that his task is to get as many participants as possible to cover as much basic knowledge as possible, then the participants who require the most tutoring time will constitute the pace group. Limited time and teaching material, for example, can force the instructor to lower the goal, leave out units, etc. Looking at our model in this way it will be easier to understand some of the differences between youth education and adult education. In youth education it is more important for the teacher to adjust the instruction pace to the lower middle of the class in aspects of performance, because otherwise he can risk losing control of the class. One safe way to cope with this problem is to let the pupils answer questions as much as possible, i.e., to encourage a recitation pattern. In competence-giving adult education the components of the frames are different. The participants have in most cases made a voluntary decision to enter municipal adult education. They have joined the educational system because they want to acquire knowledge. Then there exist plenty of reasons why they want knowledge and they also intend to use it in the future.

That leads us to the question: what knowledge? The answer in this situation must be: knowledge as expressed by society's merit system. In lower and higher secondary education that generally means a plea for good marks. If the dominant opinion among instructors and participants is that municipal adult education should provide knowledge which can be valued in terms of marks, it is hardly surprising that the teaching process shows a very productive pattern. That could also explain why teachers and participants use practically no time for planning together. The limited time together with other components of the framework encourage structuring activities. These are quite far removed from our ideals for adult education as mentioned in the beginning of this paper. Why waste time on experience-based education when society's merit system only requires core facts often superficial and which ideally are measured by tests? Activities which cannot be quantified should not take resources from the educational situation. As long as knowledge in competence-giving adult education often is equal to superficial subject-based knowledge, it is very difficult to change the direction of teaching activities. If the actors interpret the framework into another way in favour of a more experience-oriented direction, it will also be more easy to make the necessary changes in the framework. In Sweden there are other types of adult education, such as popular education, which do not operate within the same framework and where one can find more frequent examples of experienced oriented education.

To summarize our findings for competence-giving adult education: a) there are seldom activities in the classroom in accordance with expressed official ideals and objectives. b) the instructional process is different between youth education and competence-giving adult education. c) the instructional process in competence-giving adult education is characterized by patterns of reception meaning instructors presenting facts for the audience while in youth education the instructors' activities are dominated by soliciting. The author of this paper explains the reasons for results a-c by referring to a theoretical model meaning that the "actors'" interpretations of the framework for adult education, inclusive society's qualification system, give these inevitable results.

The presented results could be used as an argument to change the framework of competence-giving adult education into a direction which strengthens these findings. However, what should be done if one wants to change the whole picture? One alternative would be to apply experienced based activities in the teaching process. Such a standpoint, however, means that society's values about knowledge must be changed. Instead of superficial subject oriented knowledge, stress must be put on knowledge gaiming at a more profound comprehension which emerges from the participants' own experiences.

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VISUAL THINKING FOR ADULT LEARNING

by

John A. Hortin

Kansas State University

Experimental phenomenology requires that educators acknowledge the experience of the learner. In today's technological world many or these experiences are coming to the learner in the form of external images by way of the television screen and verbal information from the political, business, and technological and scientific communities. Gregory (1970) argued that verbal language and verbal thinking have limitations because of their elitist function. Technology has created elitist groups who have their own languages. Scientific, political and elitist languages are creating illiterates by excluding those who lack the power of this specialized language. Thus, it is possible that we may not be able to think freely, creatively and rationally in a world controlled by these highly specialized groups. Mitchell (1979) and others have decried the misuse of the English language by administrators, educators, researchers and bureaucrats who subject readers and listeners to obtuse, pedantic, or unintelligible information.

Technology necessitates that we develop newer, better methods and skills for handling information and preparing society for the future. Gregory (1970) said, "These situations demand different skills: different ways of ordering, handling and seeing objects" (p. 166). An innovative approach to understanding our environment and preparing for the future so that we do not "create a world beyond the restraints of our intelligence: a world we cannot see" (Gregory, 1970, p. 166) is the potential application of the concept of visual literacy.

Visual literacy is the ability to understand (read) and use (write) images and to think and learn in terms of images (Hortin, 1980, p. 218). Flory (1978) summarized the primary concepts of visual literacy as follows:

(1) A <u>visual language</u> exists;
(2) People can and do <u>think</u> visually;
(3) People can and do <u>learn</u> visually;
(4) People can and should express themselves visually. (p. 4)

Some visual literacy proponents have become caught up in the current interest in left- and right-brain hemispheric research and used this research to support the need for visual literacy programs. However, a broader perspective on research is needed, one that investigates other areas of mind research including brain chemistry, psychobiology, visual thinking, visualization, and visual rehearsal. I believe that adult educators need to become more aware of the uses of visual thinking. McKim (1972) wrote:

Dr. John A. Hortin, 3004 Tamarak, Manhattan, KS. 66502

> Visual thinking pervades all human activity, from the abstract and theoretical to the down-to-earth and everyday. An astronomer ponders a mysterious cosmic event; a football coach considers a new strategy; a motorist maneuvers his car along an unfamiliar freeway; all are thinking visually. You are in the midst of a dream; you are making order out of the disarray on your desk: you are thinking visually. (p. 6)

Hadamard (1945) wrote that creative thought is often interfered with by one's own language. Hadamard (1945) suggested the use of mental pictures to break out of the language barrier. More recent research on visual thinking has postulated similar views (Samples, 1976; Edwards, 1979; McKim, 1972; Paivio, 1971; Bry, 1978; and Arnheim, 1969). Knowlton (1966) said:

> Language does indeed sometimes 'categorize the world' in misleading ways. For instance, the speakers of Indo-European languages have great difficulty in seeing the totally intimate relationship between space and time. (p. 181)

Whorf (1956) suggested that this may be due to the fact that Indo-European languages apply labels of "space" and "time" in a way that demands thinking of such separation (Knowlton, 1966, p. 181). Hadamard's (1945) conclusions came from research he conducted with famous scientists whom he questioned about thinking and imagery. Knowlton (1966) reported his findings, saying:

> Most agreed, as did Einstein (who was one of these respondents) that words and numbers had to be supplemented when first dealing with unusually intractable problems on the frontiers of knowledge. Describing his own case, Einstein reported that he often used visual and kinesthetic images when coping with difficult problems; and that only after 'playing' with the new idea in this way for some time did he find it possible, in a 'secondary stage,' to recast the new insight into words or mathematical notation. (p. 181)

Patten (1973) in an article entitled "Visually Mediated Thinking: A Report of the Case of Albert Einstein" said that the creative thought processes of Einstein were basically nonverbal. Through statements and biographies of those who knew Einstein, through Einstein's own scientific and personal writings and through comments by Max Wertheimer, a psychologist and personal friend of Einstein, Patten (1973) built a case for Einstein's success in using visual images for problem solving (p. 415). Citing several sources, Patten (1973) showed that Einstein's verbal development was delayed and as a result he developed unique and creative abilities in visual thought (p. 416). Patten (1973) concluded

> A more open scientific attitude toward unusual thought processes and greater utilization of the nonverbal sense modalities could increase understanding of untapped sources of mental power. A study of the problem-solving strategy of geniuses would probably be a good place to start. The popular notion that the total thinking potential of the human brain remains to be exploited may not be unjustified. (p. 420)

Foster (1976) said, "The reaction of many to the film 2001: A Space Odyssey is an indication of the lack of visual literacy" (p. 9). He pointed out that certain films may be disappointing to people because they are untrained to perceive the elements in the film. "An understanding of how these elements are used to influence audience reactions may be the minimal requirements for becoming visual literate" (Foster, 1976, p. 30). Foster (1976) discussed what it means to be visually literate when he said:

> Visually literate people understand film as an illusion of reality. They realize how film has a special relationship to reality because of the nature of photography, but even the photographic image cannot record truth, as evidenced by the Zapruder film of the John F. Kennedy assassination. Nor does film accurately reproduce surfaces of reality. Motion is an illusion, and the camera distorts reality. Visually literate people know that the more realistic a film appears to be, the more likely it is to be highly controlled. A visually literate person realizes how filmmakers alter real time and real space in film. (pp. 50-51)

Abraham Zapruder was the man who happened to be on the scene and took film footage of the Kennedy assassination (Tyler, 1972, p. 74). The film Zapruder fatal shot has been used as evidence to prove two contradictory theories about where the shot came from (Foster, 1976, p. 40). Tyler (1972) wrote that perhaps the film footage clouded the truth rather than shed light on the case. "The purpose of reason, like the purpose of art, is to look behind those appearances that are opaque surfaces (for those surfaces may be misleading), to look beyond the technically visible areas (for there the true clue may hide itself)" (Tyler, 1972, p. 74).

Two concerns of visual literacy proponents are the (1) communication concern that involves the understanding and transmitting of visual information and the (2) art concern that emphasizes the awareness and appreciation of visual events. The first concern is based on the theories of communication and behaviorist learning and their grounding in external visual stimuli. The communication concern promotes visual literacy as a means for helping people to receive and transmit visual information. Visual literacy communication proponents are interested in visual sequencing, visual metaphors, visual literacy training, and visual elements and structure of visual language.

The art concern involves aesthetic insight which enables the visually literate person to appreciate and reflect upon images. The art concern emphasizes the emotional or affective effects of images. Ideally, we experience emotions and insights when we learn to "see" art, and these images thus expand our understanding and appreciation of our world.

I prefer to use the term visual event rather than image in this context because we "experience" the image or visual event in terms of three stages. The first stage might be called "before-the-event" and this level is based on the background and previous experiences of the viewer. Paul Wendt (1962) said, "The meanings of pictures are not in the pictures themselves, but rather in what we bring to the pictures." The second stage is the "straightforward experience" (Ihde, 1979, p. 45) or the event/experience as it happens. An individual experiences a visual event and becomes involved with it; he attends to the experience; the experience is real. The third stage is thinking about the experience or reflection on the visual event. Ihde (1979) summarized:

> Straightforward experience, I could and did characterize: it was actional, involved, immersed in the project of the moment, narrowly focused and concentrated. My thinking about that experience, also an experience in the general sense, was a reflection or a thematizing of the straightforward experience (p. 45).

A visual event also has two levels of understanding: the surface (descriptive) level and the deeper (experience) level. Both levels are needed to comprehend and appreciate images and each level affects the other. Perspective or point of view is necessary to examine the visual event, and perspective depends upon the background of the individual, the actual experience of the visual event in terms of amount of involvement, sensations, effects, etc., and the reflections afterward. Structure and elements also are influenced by background, the actual experience and the reflection upon that experience. Schiller (1976) wrote:

> Being visually literate is an aptitude. It is a capacity to use imagery (visual and manipulative impression and expression) to facilitate, deepen and complete comprehension and conceptual learning. By conceptual learning we mean the awareness of describable properties, relationships and connections among all visible and invisible phenomena in human experiences. (p. 4)

Teaching students to be visually literate therefore involves sharing mental strategies that use mental imagery, visualization, mnemonics, dual coding and symbolic systems to store information, interpret and develop new ideas, and solve problems. I suggest it is time to take another step in the development of creative thinking by including the research and theories on strategies and methods for understanding the visual event and thinking visually. Visual literacy is not only understanding and creating the visual event; it is a means to visual thinking.

So far, I have discussed and emphasized external visual events and their relationship to communication and aesthetic appreciation. The third stage or the thinking about the visual event leads to another aspect of visual literacy: internal visual events. It is important to note that the visual event can occur not only as a result of stimuli in the external world, but also through the creation of internal visual events or images by our own visual thinking and imagination.

Visual thinking is the ability to create visual events in our minds to help us solve problems, interpret the past, relive moments, process external visual stimuli and create our own meaning. One aspect of visual thinking that is quite useful and should be addressed by adult educators is the act of visual rehearsal. How often does a person think about the consequences of a particular behavior and decide against that behavior? How often does a person visually rehearse a scene in his mind when he is about to ask for something important, such as a raise? Visual rehearsal is a method for planning for the future. A person might visually rehearse the important procedures in a difficult task before actually performing that task. Also, visual rehearsal helps the individual to gain insight into problem solving. Through reflection on visual rehearsals with frequent repetitions and changes in perspective and strategy, we can generate new meaning, anticipate problems, and choose from several possibilities. To visualize or to rehearse visually is to take

responsibility for the future. If a person accepts the fact that images he deliberately programs have power to affect outcomes, he can achieve confidence, psychological readiness and some strategy for success.

Visual literacy training offers the possibility for reflecting on preconceived actions or experiences through visual thinking. Actions, behavior, projects and ideas have always been conceived in the future tense in terms of planning. Our belief systems -- how we see ourselves and see future or projected actions -- can certainly affect those actions. For instance, in holistic medicine patients are being taught self-healing techniques through visualization (Bry, 1978, p. 67). It therefore seems plausible that not only can patients be taught to control the healing powers within their own bodies, but adults can also use visualization techniques to teach themselves, prepare for future learning experiences, sharpen their memories, and improve self-image. We can rehearse our future experiences and carry them to completion in our imagination (Collins, 1981).

For instance, mentally rehearsing a speech before an imagined audience gives the speaker some confidence and practice. The speaker visualizes the seating arrangement, the faces and eyes of the audience, the ambience of the room, and the "image" he projects while he is delivering the speech. This is not a verbal rehearsal in the traditional sense but a visual experience that provides psychological readiness through a reflection upon images, a process much like the "movies of the mind" that Bry (1978) discusses in her book, Visualization: Directing the Movies of Your Mind. Visual rehearsal along with verbal rehearsal, relaxation techniques, role playing, and imagining oneself in a future situation can help one to be better prepared for the future. Through reflection upon mental rehearsals, we can generate new meaning, imagine other possibilities, anticipate problems, detach ourselves from the here and now in order to experience possible future situations, choose the best strategies and make a conscious effort to control and become responsible for future experiences. Bry (1978) wrote that "solutions to seemingly insoluble problems can be found by turning in to our inner images" (p. 7).

Future theory development for visual thinking lies with phenomenological research because of its emphasis on doing, or what is often called "participatory experience." Martin Heidegger confessed that although he had thoroughly read the main works of Husserl, he was not able to understand phenomenology until he learned to "see phenomenologically" (Ihde, 1977). Visual rehearsal provides adult learners the experience that enables them to "see" the future.

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SELF-DIRECTED CONTINUED LEARNING IN NURSING: A REPORT OF A STUDY OF THE CONTINUED PROFESSIONAL LEARNING OF MEMBERS OF THE ILLINOIS NURSES' ASSOCIATION

Mary Ann Kathrein, Ed.D.
Saint Xavier College*

INTRODUCTION

Self-directed learning, a frequently used mode of continued learning in nursing, has long been considered a component of nurses' continued professional learning. Participation in self-directed continued learning activities, however, has been accorded less credibility and recognition than participation in other-directed activities. Efforts to provide resources and services to participants in self-directed continued learning activities have also been less vigorous than efforts to provide such assistance to participants in other-directed learning activities. The lack of a strong commitment to, and promotion of, self-directed learning as a legitimate mode of continued learning in nursing may stem from the confusion and controversy surrounding self-directed learning and its place in continuing nursing education. The relationships between self-directed learning and the definition, purposes, process and systems of continuing nursing education need to be clarified. A major factor inhibiting the clarification of these relationships is the lack of knowledge concerning self-directed continued learning, particularly an understanding of what is being learned in self-directed study and how it is being learned. This study addressed the problem of this lack of knowledge by providing information on the content and process of self-directed continued learning in nursing.

The major purpose of this study was to explore the content and process of self-directed continued learning in nursing. A secondary aim was to assess the applicability of the Knox model (1973) of life-long self-directed education to self-directed continued learning in nursing. The Knox model was selected for use in this study on the basis of its consistency with the profession's goals of continuing education, its potential for use in defining self-directed study in its relationship to the systems of continuing nursing education, and its strengths in defining a goal-directed, cyclical learning process which encourages continuous professional learning. The research questions addressed in this study were:

1. What content areas are studied in self-directed continued learning in nursing?
2. What is the basis for learner selection of self-directed learning activities over other-directed activities as a method for studying a content area?
3. What areas of content are perceived by the learner as being more effectively learned through self-directed learning than others?
4. What learning activities are performed in self-directed continued learning in nursing?

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*Associate Professor, Saint Xavier College, School of Nursing, 103rd and Central Park Avenue, Chicago, Illinois 60655.

5. What is the relationship between the given model of self-directed learning activities and the actual performance of these activities in self-directed continued learning in nursing?

6. What learning activities are perceived by the learner to be desirable in self-directed continued learning in nursing?

7. What is the relationship between the given model of self-directed learning activities and the learner-perceived desirability of these activities in self-directed continued learning in nursing?

METHODOLOGY

The method of study was descriptive survey, in which a two-part questionnaire served as the study instrument. Part I of the instrument was designed to obtain information on the content of self-directed continued learning in nursing. Four major content areas were developed, from which 29 sub-areas of content were defined. The content areas were derived from an organizational scheme based on a belief framework that views nursing as a process which interrelates with other processes and draws from the knowledge of other disciplines in its execution. In continued learning, the nurse may focus her study on the nursing process, an interrelated process, and/or a knowledge area from a supporting discipline, as it relates to her practice role and setting. As a professional, the nurse's continued learning would also focus on study related to individual professional development, and to the development of the profession. The four major categories of content derived from this framework were: Nursing Process, Interrelated Processes, Interrelated Disciplines, and Professional Concerns. Part I of the instrument sought information on the frequency with which the content areas were the focus of self-directed study, the degree of perceived effectiveness of self-directed study in learning the content areas, and the basis for using self-directed, rather than other-directed study, as a mode of learning the content area.

Part II of the study instrument was designed to obtain information on the activities of self-directed continued learning, and to assess the applicability of the Knox model to self-directed continued learning in nursing. The model was used as a basis for identifying nurses' present and desired activities of self-directed continued learning. An item universe of 114 activities was extrapolated from the five major model components of: Needs, Objectives, Setting, Learning Activities, and Evaluation. Part II sought information on the extent to which activities derived from the model have been performed in self-directed continued learning in nursing, and the extent to which these activities were viewed as desirable, or would be performed in the future if assisting resources and/or services were available. Item-population sampling was used in the construction and administration of Part II of the instrument.

The instrument was administered by mail to a random sample of members of the Illinois Nurses' Association. The 267 respondents represented nurses in all major fields of employment, job positions and clinical areas in nursing. The respondents also varied in their educational background in nursing, chronological age and number of years since graduation from a basic nursing program. The data obtained were analyzed using the SPSS subprograms FREQUENCIES and CROSSTAB.

FINDINGS

The subject matter of the respondents' self-directed study included diverse areas of knowledge in nursing as well as in other disciplines. Their learning involved the study of content related to all four major categories of content areas. Of all the 29 content areas, Nursing Assessment, Teaching-Learning and Nursing Process were studied most frequently. Just under 50 percent of the respondents studied these areas frequently or almost always. All three of the content areas include the study of subject matter that is process-oriented. The greater frequency of study of these areas suggests a need for, or usefulness of, the knowledge areas by nurses in varied practice settings or roles. It may be that these processes are generally applicable to nursing practice and would be studied by nurses in any field of employment, job position and clinical area. Writing, Nursing Research and Health-Related Field were the least frequently studied of the content areas. At least 57 percent of the respondents indicated that they never studied these areas. Though knowledge from these content areas may also be applied to any practice setting, perhaps an understanding of the applicability of the knowledge to practice requires more direction from others in learning. There were significant relationships ($p < .05$) between the frequency of study of certain content areas and demographic variables. The analysis of these relationships suggests that the respondents tended to study content areas that could maintain or further their expertise and competency in their clinical area. There also appeared to be a tendency to study content areas that were associated with the knowledge and skills useful to, or necessary for, functioning in a particular role or setting. Thus the respondents apparently used self-directed study to maintain or enhance professional competency and job performance, and/or to solve work-related problems. For example, the content area of Maternal-Child was studied more frequently by nurses in that major clinical teaching/practice area than by nurses in other clinical areas. The frequency of study of Nursing Research and Writing were significantly related ($p < .002$) to the field of employment--school of nursing. The job positions of administrator, consultant and instructor were significantly related ($p < .001$) to the frequency of study of Nursing Research.

The bases for the respondents' use of self-directed rather than other-directed learning in the study of a content area were: individual preference for self-directed study; the presence of a programming problem which prevented attendance; and, reasons indicated by the response, "other." The respondents were asked to indicate their reason for selecting self-study as a means of learning a content area rather than attending a program or other-directed learning activity. With the exception of 5 of the 29 content areas, the difference between the percent of respondents preferring self-directed study and the percent of those conducting self-directed study because of programming problems was not greater than 10 percent. In the study of 19 of the content areas, the differences were slight--less than 5 percent. Apparently, as many respondents preferred to learn these content areas by self-directed study as those who did not. The preferred mode of study of these areas, then, may have been more related to the respondents' individual characteristics and learning styles than to the nature of the subject matter studied. The basis for self-directed study for 35 to 50 percent of the respondents (varying with the specific content area studied) was that a problem was encountered in attending a program related to the content area. A program being offered at a time and place inconvenient to the respondent was the programming problem that received the largest total number of responses, followed by the problems of a program not oriented to the respondents'

needs, unawareness of a program offered in the content area and prohibitive cost. The frequency with which each problem was selected varied with the particular content area. The content areas for which other-directed learning was most often preferred to self-directed learning were Gerontological, Nursing Skills-Technical, Legal Aspects and Critical Care. The response "preferred self-directed study" was most often selected in reference to learning the content areas of Nursing Process, Nursing Assessment, Mental Health, Growth and Development, Writing, and Behavioral Science.

The perceived effectiveness of self-directed study in learning a content area varied with the content area studied. The content areas perceived by most respondents (70 percent or more) to be learned most effectively through self-directed study were: Maternal-Child, Nursing Assessment, Nursing Process, and Medical-Surgical. Nursing Assessment and Nursing Process were also among the three most frequently studied content areas, and were two of the content areas most frequently studied by self-directed learning because it was the preferred mode of learning. The content areas of Physical Science and Health-Related Field were least often perceived to be learned very effectively through self-directed study, and were among the five least frequently studied content areas. Nursing Research and Writing, also among the five least frequently studied content areas were the content areas most often perceived (by 48 to 50 percent of the respondents) as being less effectively learned by self-directed study. The findings suggest an association between the perceived effectiveness of self-directed learning in the study of a content area and the frequency with which the content area is studied. There may also be an association between preference for self-study and perceived effectiveness of self-study of a content area. The perceived effectiveness of self-directed study of 15 content areas was significantly related ($p \leq .05$) to one or more of 5 demographic variables. The analysis of these relationships suggest an association between the perceived effectivenuess of learning a content area and the relevancy of that content area to the nurses' practice setting.

The Knox model formed a workable basis for identifying the respondents' present and desired activities of self-directed continued learning in nursing, and it served to identify a certain learning pattern of the respondents. The findings of the study indicate that the process of the respondents' self-directed continued learning in nursing included the performance of learning activities related to the five major components of the model: assessing needs, setting objectives, considering environmental factors in learning, conducting learning activities and evaluating. The finding that 89 percent of the item respondents set short-term goals for their learning and 91 percent of the item respondents set long-term goals suggests that the self-directed learning of the respondents is a goal-directed process. The analysis of the frequency of activities performed by the respondents suggests a certain pattern of learning within the process of self-directed continued learning. The pattern consists of the more frequent performance of those activities which rely on personal and material resources in the nurses' work setting for their implementation. This pattern appears to be followed consistently in the performance of activities related to all five major components of the model process, and is also evident in the nurses' selection of other-directed learning activities to supplement self-study.

When the nurses were asked to indicate the average amount of time they spent in self-directed continued learning in nursing over the past 12 months, over 83 percent indicated they spent at least one hour per week in self-directed

continued learning. Of these, nearly 30 percent indicated they spent at least 6 hours per week in learning. This finding suggests that for most respondents, self-directed learning is conducted on a regular basis. It may also suggest that the respondents' self-directed learning is characterized by continuous, rather than episodic, learning.

The respondents indicated that nearly all (111 of 114) activities derived from the model would be performed more frequently if resources and/or assistance were provided. The frequency of performance of at least 40 percent of the activities would be increased significantly ($p \leq .05$) if resources and/or assistance were provided, suggesting a need, or desire, on the part of the nurses for help in their self-directed continued learning. The activities that the respondents indicated they would perform more frequently included those involving the use of personal and material resources outside their work setting, and the use of resources which were not often in current use. The nurses' pattern of self-directed learning, then, may be altered if resources and/or assistance were made available to them in their learning.

The study findings suggest that activities of the five major components of the Knox model were related to both the performed and desired activities in the respondents' self-directed continued learning. The findings further suggest that the activities of the model were more closely related to, or reflective of, the activities of self-directed continued learning that the respondents viewed as desirable, than to those activities which they actually performed.

DISCUSSION

The study provided some beginning insights into the self-directed continued professional learning of nurses. Its results indicated that most respondents were actively and continually involved in their self-directed learning. In their learning, they drew from the resources of their peers and practice environment, and they participated in other-directed learning activities to augment their learning. A greater recognition of their self-directed learning as a legitimate mode of continued professional learning seems warranted. This recognition could take the form of efforts to incorporate self-directed learning into the established system of continuing nursing education, and attempts to plan continued learning experiences which would coordinate self-directed and other-directed modes of learning.

The findings indicated a need by the respondents for resources and services to aid them in their self-directed continued learning, and suggest that the effectiveness and the pattern of their learning may be enhanced if such assistance were provided. Initial interventions that may be beneficial in facilitating their self-directed continued learning include: providing access to a greater variety of personal and material learning resources; developing learning materials appropriate to their continued professional learning; providing learner counselling in problematic areas of self-directed learning; and, instituting means to enrich peer learning in the practice setting.

Respondents who would have preferred to participate in programs in their continued learning were deterred from doing so because of the programming problems encountered. It would seem that measures designed to address these problems would be warranted, particularly in respect to: more comprehensive

assessment of the needs of the continuing professional learner; greater flexibility in scheduling programs in respect to time and location; consideration of program costs; consideration of the scope of subject matter of nurses' continued learning in determining program content; and, attention to the varying levels of complexity of subject matter in planning programs. Perhaps a greater focus on the application of processes, knowledges, and skills to the practice setting in programs would also lead to a closer harmony of program content and participant learning needs. Program providers may also wish to assume more responsibility for the continued learning of their participants by offering direction to them on how to build on the knowledge gained in the program in their continued learning.

The model used in this study was useful in identifying the self-directed continuing learning activities of nurses, and may also be helpful to other disciplines in investigating the learning activities of their members. In that that model was related to the performed and desired activities of the respondents, it may prove helpful to those seeking a model for use in teaching a process of self-directed continued learning, as in nursing education, continuing education and staff development.

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A Study of the Relationships of Self-Selected Goals to the Persistence of Participation in Some Adult Education Programs

- by Robert L. King, Ph.D., Grant Wood Area Education Agency

Rationale for the Study

There has been extensive research regarding the characteristics of those who participate in adult education. Much of that research has described the participants by a variety of demographic categories, sometimes differentiating participants from non-participants on the basis of such categories (Johnstone & Rivera, 1965; Carp, Peterson & Roelfs, 1974). There also have been a number of studies undertaken to identify the reasons for participation of those involved in educational programs or projects.

As early as 1933, the reasons given for participation in Adult Evening Institutes in England were studied and classified by Hoy (1933) into 6 categories. Williams and Heath (1936) found 4 categories of motives for participation and somewhat later, Nicholson (1955) constructed an instrument with three categories of items for the assessment of reasons for participation. Others have attempted to define certain motives which were inferred to underlie the reasons for participation.

Houle (1961) suggested three orientations which he considered to be significant factors in the motivation of participants in adult education programs. Those were: "goal-orientation," "activity-orientation," and "learning-orientation." Research regarding reasons for participation subsequent to Houle's (1961) presentation has leaned heavily upon his concepts of learner orientations (Sheffield, 1962, 1964; Boshier, 1971, 1976; Burgess, 1971). Studying goals, rather than reasons, Londoner (1972) reported that "....teachers and students had significantly different viewpoints concerning the importance of some goals....experienced teachers were more inclined to misjudge the overall importance of a set of goals" (pp. 267). None of those investigations attempted to employ either the reasons for participation or motives inferred from those reasons to differentiate either the various degrees of persistence or participants from non-participants.

There appear to be several advantages to be gained through employing goals rather than reasons when investigating motivation for participation. A reason can be offered in retrospect as justification for an act. It does not necessarily imply an end that is to be obtained or achieved, whereas a goal has the quality of achievability. A reason for participation can be held only by one who is already participating. A goal, being something that must be contemplated in advance, could be held by participants and nonparticipants alike. It would be difficult to advance those arguments in regard to reasons.

Research regarding the reasons given by adults for their participation in educational activities has, for the greater part, been focused upon programs which, in addition to general interest courses, had as a major purpose, the offering of courses for credit, for certification or for professional growth requirements. The reasons for participation reported by those studied were highly reflective of that influence. In order to enhance the likelihood that motivational factors more intrinsic to the participants would be revealed, the focus of this study was, exclusively, upon registrants of those programs which offered no credit or certification that could have served as an incentive for participation. Further, a concentration upon those who were enrolled in courses which were supported by fees paid by the participants was expected to yield results more purely related to the concept of

Robert L. King, Ph.D., 18 Durham Court, Iowa City, Iowa 52240

adult general interest programs.

This study, then, was designed to attempt to differentiate degrees of persistence on the basis of goals selected and ranked in importance by a sample of adults enrolled in an adult education general interest program. Degrees of participation were expressed by the operationally defined variable "persistency status," and reasons for participation were encapsulated in terms of goal statements. In addition to their applicability to all degrees of persistency status, goal statements also have the quality of achievability, a dimension which has not been previously investigated.

Statement of the Problem: This was a study of the relationship of self-selected goals to the persistence of participation in a general interest adult education program. Persistency status was determined by the number of registrations effected by a participant within the time frame of the study. Those who were more persistent completed one or more additional courses during that period. The extent of the influence of goals and goal achievement upon persistency status was investigated in an attempt to determine whether:

1. There are differences between the goals of those who are more persistent and the goals of those who are less persistent in adult education programs.
2. There are differences in the achievement of goals between those who are more persistent and those who are less persistent in adult education programs.

The Sample: The group of respondents consisted of 282 female and 58 male participants. The age range for that group was from 14 through 83 years with a mean of 32.07 and a S.D. of 12.67 years. The level of educational attainment ranged from 3 through 22 years with a mean of 15.91 and a S.D. of 2.79 years. The number of adult education courses reported as having been taken ranged from 0 through 11 with a mean of 1.67 and a S.D. of 2.10.

Instrumentation: Four forms were designed for the collection of data. The first form described the study to the students and requested their participation as respondents. The second form provided a list of 41 goals which might be achieved while participating in the course. The third form provided a vehicle for recording a selection of five of those goals ranked in the order of their importance to the respondent. It also provided space for recording demographic data. The fourth form provided a means for reporting goal achievement data upon completion of that course.

The goal statements which constituted the items of the third form were derived from a variety of sources. The lists of reasons from previous studies (Houle, 1961; Sheffield, 1962; Johnstone and Rivera, 1965; Boshier, 1971; Burgess, 1971) were reviewed and added to an item pool. Statements given to the author by adult education participants regarding their goals or reasons for participation were added to the pool. That pool was then reduced through the elimination of items relating to academic or professional growth credit. Redundancies were eliminated by casting out all but one of any identical items and by rephrasing closely related items so that the resultant statement subsumed the essence of each.

Design of the Study

Participants of the courses selected in accordance with the stated criteria were presented information about the study, and the necessary forms, as they reported for the course. They were requested to provide the specified information, to select and rank in the order of their importance 5 of 41 suggested goals, and to return the forms at the end of the class period.

Upon completion of that course, the contributors were requested to indicate which of their selected goals had been achieved. Once that data had been compiled, the registration records of the sponsoring community college were examined to determine the persistency status of each of the registrants of the program. The data contributed from all sources were then encoded for processing and entered into an SPSS system file (Nie et. al., 1975) for analysis.

The goals which were selected and ranked by those who were more persistent were tablulated into five columns, each column representing the order (first through fifth) in which the goals had been chosen. The item numbers for the goals chosen in each column (including "0" which represented "no goal chosen") were then ranked by the frequency with which they had been chosen. The item number for each goal chosen by each respondent was then replaced by a number representing the rank of that goal from the column corresponding to the order in which it had been chosen. A single score for each respondent which served as a composite representation of all goals selected and ranked by that respondent was then developed by totaling the rank value scores of the goals selected. Three variables were derived from that process, Score-Goals Chosen, Score-Goals Achieved and Score-Goals Not Achieved. Differences in achievement of goals and/or goal choices between the more persistent group and the less persistent group were reflected by differences between their scores on those variables.

Reliability: The reliability of the ranking procedures used to treat the goal selections was computed by using "Cronbach's Alpha" from the SPSS Subprogram Reliability (Hull & Nie, 1979). The Alpha coefficient was .5877.

Statistical Analysis: A multiple regression analysis was conducted utilizing persistency status (less persistent - more persistent) as the dependent variables. The contributions of the demographic variables (intent for future enrollment, category of courses, prior adult education, level of educational attainment, age and sex) to the variance of the dependent variable (persistency status) were assessed by entering them into the regression formula prior to the introduction of the variables representing the goals of participants (Score-Goals Chosen, Score-Goals Achieved and Score-Goals Not Achieved). In that manner those demographic characteristics served as control variables. The remaining portion of the variance of the dependent variable which was accounted for by the regression formula was then attributable exclusively to the various conditions of goal choices. The result represents a very conservative estimate of the contribution of the choice of goals and the achievement status of goals to persistency status.

The R-Square Change statistic provided by the SPSS Subprogram Regression (Kim, J. & Kohout, F., 1975, pp. 320-367), using the standard regression approach, can be interpreted as the percentage of the variance of the dependent variable that can be directly attributed to the independent variable to which it corresponds. The test of significance for the R-Square Change statistic is the F-ratio computed in accordance with formula 33 (Kim, J. & Kohout, F., ibid., p. 336). An F-ratio significant at the .05 level resulted in a rejection of the null hypothesis.

Results of the Analysis

The multiple regression formula accounted for approximately 20% (R-Square = .19735) of the variance of the dependent variable, "persistency status". The F-ratio related to R-Square = .19735 was 5.70779 which, with 14/325 d.f., was significant at the .001 level. The control variables accounted for

.14635 of the variance of the dependent variable leaving the remaining .05101 of the variance attributable to the combination of independent variables, Score-Goals Chosen, Score-Goals Achieved and Score-Goals Not Achieved.

There were several items of interest regarding the demographic characteristics that served as control variables which should be considered at this point. Age, for instance, was not significantly related to persistency status, (F=1.70067 with 14/325 d.f., sig. = .20). There was also no demonstration of significance in the relationship between sex and persistency status (F=2.85071 with 14/325 d.f., sig.=.10). Both the level of educational attainment (F=5.86735 with 14/325 d.f., sig. = .025) and the number of prior adult education courses (F = 29.72141 with 14/325 d.f., sig. = .001) were significantly related to persistency status. The extent of the relationship was much greater in the case of the number of "prior adult education courses," however with that variable accounting for 7.3% of the variance of persistency status. "Intent regarding future enrollment" served as a control variable. The responses indicating intent (F = 10.0826 with 14/325 d.f., sig. = .005) were significantly related to the persistency status of the respondent. That relationship, however, was not extensive, accounting for only 2.4% of the variance. Considered singly, no category of courses proved to be significantly related to persistency status. As a group, however, significance was demonstrated in the relationship between courses and persistency status (F = 10.8965 with 25/325 d.f., sig. = .001), but, as in the case of "intent," the relationship was limited, accounting for only 2.7% of the variance. "Prior adult education courses," then proved to be the most influential variable of those considered by this research.

Conclusions

An attempt was made to determine the influence of goals and goal achievement upon the persistency status of some participants in a general interest adult education program. Three hypotheses were proposed to facilitate the accomplishment of that end. It was hypothesized that:

1. There are no significant differences between the goals chosen by those who are more persistent and the goals chosen by those who are less persistent in an adult education program.

Score-Goals Chosen was developed as the criterion variable for the acceptance or rejection of Hypothesis 1. The statistic by which it was to be evaluated by the R-Square Change coefficient yielded by a multiple regression upon the dependent variable, "persistency status." The R-Square Change coefficient which resulted was .04532. The F-ratio computed for that coefficient was 18.35116 which, with 14/325 d.f., was significant at the .001 level. Hypothesis 1 was, therefore, rejected.

2. There are no significant differences between the goals achieved by those who are more persistent and the goals achieved by those who are less persistent in an adult education program.

Score-Goals Achieved was developed as the criterion variable for the acceptance or rejection of Hypothesis 2. The statistic by which it was to be evaluated was, again, the R-Square Change coefficient yielded by a multiple regression upon dependent variable, "persistency status." The R-Square Change coefficient which resulted was .00459. The F-ratio computed for that coefficient, 1.85866 with 14/325 d.f., was significant at the .20 level which was in excess of the .05 level required for rejection. Hypothesis 2 was therefore, accepted.

3. There are no significant differences between the goals not achieved

by those who are more persistent and the goals not achieved by those who are less persistent in an adult education program.

Score-Goals Not Achieved was developed as the criterion for acceptance or rejection of Hypothesis 3. The statistic by which it was to be evaluated was, for the third time, the R-Square Change coefficient yielded by a multiple regression upon the dependent variable, "persistency status." The R-Square Change coefficient which resulted was .44542 which, with 14/325 d.f., was significant at the .20 level. Hypothesis 3 was, therefore, accepted.

After the results of this study were considered, it was concluded that:

1. There are significant differences between the goals chosen by those who are more persistent and the goals chosen by those who are less persistent in adult education programs.
2. There are no significant differences in the achievement of goals between those who are more persistent and those who are less persistent in adult education programs.
3. Even though significant relationships between goal choices and persistency status were demonstrated, the limited extent of those relationships, 4.5% of the variance, may negate the practical value of their existence.

The conclusions of this study should be interpreted in terms of the influence of the reliability of the procedures (Cronbach's Alpha = .5877) upon the results. Although an Alpha coefficeint of .5877 is of an acceptable level for ranking techniques of the nature of those employed, the internal consistency of the procedures left a considerable amount of the variance unexplained. In view of the unexplained variance, the level of significance of the F-ratio by which Hypothesis 1 was rejected was surprising. Perhaps an explanation of a greater portion of the variance might have resulted from more reliable procedures. Further, the acceptance of both Hypthesis 2 and 3 may have been a result of the level of the reliability of the procedures rather than the lack of a relationship between the respective independent variable and persistency status.

It is believed that the reliability of the procedures employed to collect and treat the data of this study could be improved by eliminating "passenger items" (those items having very low frequencies of selection) from the list of possible goals, and by reducing the occurrences of ties in the ranking of items.

Seventeen "passenger" items could be eliminated by excluding those goals which were selected by less than 4.01% of both those participants who were more persistent and who were less persistent. The occurrence of tied items in the ranking procedures could be greatly reduced by having a much larger number of responses upon which to base the ranking of goals.

There were some observations which might be made regarding the group of participants of this study which may have some implications worthy of the consideration of practitioners of adult education. For instance, the goal selections made by those who were less persistent were more variable than the goal selections made by those who were more persistent. Although approximately 40% of the goal choices for either group fell within the upper three rank values, 15.4% of the goal choices of those who were less persistent were ranked 19 and below while only 7.2% of the goal choices of those who were more persistent were ranked 19 and below. The remarkably high rate of goal achievement reported by the participants of this study should also be of interest to adult educators. There were 1700

goal choices reported by the participants with 1602 of those choices being reported as having been achieved through participation in the program. The rate of achievement was, therefore, 94% which, when the great diversity among goals, participants and categories of courses is considered, represents an unexpectedly high level of goal achievement. That high level may indicate that many participants held expectancies which were rather well conditioned to the format of general interest community education programs. Therefore, goals were selected which could readily be achieved through such a program. The greater variability observed in the goal selections of those who were less persistent may indicate that group to be less familiar with that format than their more persistent counterparts. Those who were more persistent appeared to select goals which were more consistent with the "learning orientation" described by Houle (1961). It may then be the case that general interest community education programs are designed in a manner solicitious primarily of participants characterized as "learning oriented".

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I. An Investigation of Adults Who Have Retired in a Positive Way - Facts and Theory

Burton W. Kreitlow
Doris J. Kreitlow
University of Wisconsin-Madison

II. Introduction

This research focused on persons who were judged to have retired in a positive way. It was different from most studies of older persons that depended upon grant support. This study did not deal with persons who had major problems such as ill health, a negative response to forced retirement, widowhood or nursing home residency. Such earlier problem-focused research contributed to the development of hypotheses and theories with a negative orientation that have persisted in the gerontological literature.

This research was different. Rather than beginning with such problems or using hypotheses or theories as a frame of reference, it was determined that the primary sample would be retired adults in normal life settings (community senior centers. age segregated housing complexes, the local community, etc.) No grant support was sought. This approach provided the opportunity to identify positive role models and had the potential of challenging the myths that are held about older persons. Who were the adults in these settings who had retired in a positive way? What were their characteristics? If there were common characteristics across a variety of settings, what were the sources of these characteristics in the life span? If there were both common characteristics and common sources, would this suggest substantive theory that deserved further investigation? In addition to the primary sample above, a secondary sample of social scientists was chosen to include persons with particular knowledge of other cultures.

It was with the above research objectives in mind that the methodology and procedures were developed.

III. Method

Framework - the search for hypotheses and theory to help explain the source of retirement that is positive required research methods and procedures to develop theory rather than to test theory. Grounded theory as initially described (Glaser and Strauss, 1967) was the basic framework for this investigation. No definition of a positive retirement was used. The perception of a positive retirement held by those interviewed to select the primary sample was the base. Consistency of selection among various settings would determine whether a definition could even be attempted.

Selection Procedure - The settings for investigation were selected for their diversity. In the development of theory investigators search for consistency across settings that are not alike. The nine settings were not chosen to be convenient for the investigators; they were chosen to be diverse. The social scientists selected for interview were chosen for their knowledge of other than the culture of the United States.

Authors' address: Box 865, Grand Marais, Minnesota 55604

Within the nine settings a procedure was used to provide reasonable assurance that the subjects of the investigation were considered by others to have retired in a positive way. These were identified as positively retired (+R). This was accomplished by reputational interviews. For example, in a small midwestern resort community of 1500 persons and a higher than average number of older adults, 22 adults from business, social services, and community leadership were individually interviewed and asked to name the persons in the community whom they believed had retired in a positive way. This process was used in the nine settings. Following the naming of the persons, they were asked to identify the characteristics that caused them to name them. In this midwestern community 136 different +R persons were named. The 19 persons most often named were then chosen to be interviewed in depth. The nine settings for the research, the population base of the setting and the number of +R interviewed are presented in Table 1.

The secondary sample was one of convenience and included eleven staff persons from the East-West Center in Hawaii. Those selected were professionals in the social sciences who were native of countries other than the United States. They included persons from Korea, Japan, Taiwan, Pakistan, India, Phillipines and Ghana.

See Table 1
Page 5

Interview Procedure - The primary sample interviews were performed in three stages and responses stored in notes and a taped record. The first stage included notifying the interviewee that he had been selected by reputation. He was then asked to provide a short four to five minute review of important events in his life from the earliest remembered through the present period of retirement. During the second stage of the interview, questions were asked as to why the interviewee thought others selected him; what he believed the characteristics were that he had to a greater extent than did other people and the source of these characteristics in his life span. The third stage of the interview was reserved for the collection of demographic and personal data including entry into retirement, perception of his own health and finances, age, etc. The secondary interviews were also open-end and designed to determine the characteristics of +R persons in other cultures as perceived by social scientists from those cultures.

Analysis - Qualitative and quantitative analysis were used with the primary sample. Subjective descriptions were developed for each interviewee based on original notes and the taped record. Responses to the open-end questions were summarized for each setting and compared among settings. The ten characteristics of the +R with rank orders consistently high in the nine settings were chosen as the basis for examining the source of the characteristics. Both qualitative and quantitative findings were examined to determine whether or not these data would relate to an existing or new theoretical framework. Further analysis was made of the interviewee's life reviews, open response and demographic characteristics. For the secondary sample the analysis included summaries of responses related to national policy, societal expectations and perceived characteristics of those believed to be +R in the interviewee's home culture. In a search for consistency comparisons were made between these findings and those coming from the primary sample.

Results

Identification and ranking of the characteristics of the +R in the primary sample were described first, followed by identification and ranking of the sources of these characteristics in the life span of the +R. These findings were then compared with those coming from the secondary sample. On the basis of consistency a theory was then proposed for consideration and development.

Characteristics - The personal characteristics that the 140 interviewees believed they had to a greater extent than did other retired persons are presented in Table 2.

See Table 2
Page 5

The highest ranking characteristic was that of being a volunteer. This included a number of responses all identified with giving help to others. Ninety eight of the 140 +Rs in the sample believed they had more of this characteristic than did other people. In the second ranking, 83 of 140 identified their being sociable and liking people as a key characteristic. Of the first ten ranked characteristics all except liking people and being happy were clearly linked with an interviewee's purpose for his later years. Interviewees' statements about liking people and being happy provided some basis to conclude that purpose was also a part of these. In the secondary sample, being of service to others was the most often identified characteristic of the +R. The focus of that service was more to family than it was in the primary sample. The primary sample interviewees often used the term "volunteering" to describe service while in the secondary sample that term was seldom used. Here, service to family was an imbedded part of the culture.

Source of Characteristics - Table 3 describes the source of a +R person's characteristics as identified by themselves in interview.

See Table 3
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In Table 3 the related factors were clustered; for example under family were all the interviewee responses as to the source of their characteristic that related to family and included family, father, mother, parents, brothers, sisters, grandparents, etc. Because of this clustering family was the highest ranking source among all of the characteristics. When open-end responses were summarized individually (not clustered) an altered rank order was evident. This order showed work ranked as the first source. This was followed by Family, Natural (born with it), Community Organizations, Mother, Father, School, Church organizations, Illness of Self or others, Church and Religion.

Theory - Although this investigation was not designed to test existing theories the grounded findings did make it possible to examine theories in a general way. In interviewing it was clear from the outset that Disengagement was not an appropriate theory to explain the retirement life of the +R person. One interviewee stated it well, "I didn't retire from something, I retired to something."

The existing theory to which the +R related most closely was that of Activity. Within the sample were many individuals whose expressions clearly coincided with what has been written concerning the Activity Theory. This group believed that a long, happy, and successful retirement came from keeping mind and body active. As one interviewee said about giving advice to those whose retirement is negative, "I tell them to get off of their ass." There were indications in the response of some interviewees that their own personal development was continuing. Development and Continuity Theory were appropriate to explain their retirement. Goals of the early and mid years of life that had to be bypassed in order to earn a livelihood suddenly reappeared and development in both physical and mental efforts were focussed in these directions. Among the most visible of these were the number of interviewees with artistic talents. In retirement these talents, often left fallow since adolescence, became the basis for new goals, new growth and deep satisfactions.

Had there been an existing Theory of Purpose in the literature, it would be clear from the responses of the 140 interviewees that this was the key to their positive retirement. The purposes of the +R identified in personal interviews with them were quite different than those purposes for the +R identified by social scientists from other cultures, but there was a strong base of purpose in both. For the primary interviewees the purpose related to service to friends and community, to family, to persons with problems, to new goals and new learnings for themselves, and to some form of work. In the secondary interviews which concerned persons from other cultures the purposes revolved almost toally around the immediate family and the traditional roles of the older person in the family. There was an established avenue for purpose in the culture. It is from these findings that a substantive Theory of Purpose was recommended. Within the data of the study, the purpose for all but a very few of the +R was the energy source that caused them to serve their family, to volunteer, to work part time, to bring cheer to their friends or to "get involved" in civic action. For many +R it was some social purpose that drove economic and health problems into the background and brought volunteering to help others to the forefront.

The implications of the fact that volunteerism, liking people, being busy and active, and purposeful are the top ranking characteristics of the +R; that family, work, natural qualities, organizations and crises are the top ranked sources of these and other characteristics is mind boggling. The role of educational and other social agencies from those focussing on pre-school children to those designed for the elderly will change if the above findings are proved valid by continuing research. Although the Theory of Purpose for a positive retirement should be tested in further studies, of equal importance is the need to consider purpose at any point in the life span as it relates to a person's response to illness or to crises in work, family, or community. Further research about those who have retired in a positive way has a great potential for identifying models for those yet to retire. The findings presented can be used as a base for diagnosis, counseling, and continuing education for those whose goal is a positive retirement.

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Table 1. The Nine Settings for the Research, Population Base of Each Setting and Number of +R Interviewed.

Geographic	Setting Type	Selection Base Population or Members	+R Interviewed
Midwest	Rural resort community	1,500	19
Midwest	Small city, Senior Complex	10,000	22
Midwest	Urban, Senior Center[a]	150	10
Midwest	Urban, Senior Center[a]	140	12
Southeast	Urban, high rise age segreated	400	16
Far West	Urban, Senior Center[b]	2200	19
England	Resort community	20,000	20
England	Urban, community center[c]	150	11
England	Urban, community center[c]	150	11
TOTAL			140[d]

a-Black, b-Oriental, c-Working class, d-Included were 62 males and 77 females; among them were 20 couples where husband and wife were selected individually.

Table 2. The personal characteristics that the 140 persons, selected for having retired in a positive way, believed they had to a greater extent than did others. The 10 characteristics most often identified are listed below in rank order.

Characteristics	Number of times identified	Rank
Volunteers-service to others, sharing, generous, concern for others	98	1
Likes people-sociable, kind, loving, gets along well with others	83	2
Busy and active-looks for things to do, a participator, hobbies, broad interests	72	3
Purposeful-will carry through, seeks to achieve, tries to do useful things	56	4
Happy-contented, calm, enjoys life, joyful, out-going, even tempered	49	5
Forward looking-positive in outlook, optimistic, creative, open-minded	37	6
Independent-pays own way, does own thing, free, assertive	33	7
A learner-loves to learn, keeps mind busy, curiosity	22	8
A worker-has the work ethic, works hard when working	21	9
Civically active-involved in community affairs	17	10

Other characteristics identified seven or more times were Religious n=15, Honesty n=15, Physically able n=10, well known n=7. In addition 12 persons identified things they "were not," i.e., "not self-centered," "no moaning and groaning," "not bored," etc.

Table 3. What are the sources of the characteristics that the positively retired persons believed they had to a greater extent than did others? The sources of the ten most often identified characteristics are listed in rank order with the sources clustered rather than individual, ie., family, home, mother, father, spouse, etc. are placed in a single category "Family."

Characteristics

Rank order of source	Volun-teer	Likes people	Busy & active	Purpose-ful	Happy	Forward looking	Inde-pendent	A learner	Works hard	Civic ac-tivities
Family	1	1	1	1	1	1	1	1	1	1
Work	7	3	3	3	3	3	3	2	2	2
Natural	4	2	6	4	2	2	4	3	4	6
Organizations	3	5	2	5	4	4	6	3	3	3
Crises	2	4	4	2	4	4	2	10	7	4
Schools	8	5	7	6	7	6	8	5	7	5
Retirement	6	9	4	6	7	7	10	6	4	10
Church (Religion)	5	5	10	9	7	8	5	7	7	6
Models	9	8	8	8	6	8	7	7	4	6
Community	10	10	9	10	7	10	8	10	10	10

THE USE OF "SOFT" DATA IN ADULT LEARNING AND DEVELOPMENT RESEARCH

Sharan B. Merriam*
Northern Illinois University

Edward V. Jones**
George Mason University

The purpose of research is to contribute to knowledge. Traditionally, educational researchers have tended to collect, record and analyze data in accordance with research paradigms adopted from the natural sciences. Since this approach puts a premium upon seeking the answers to predetermined questions, controlling for variance, and random sampling among potential subjects, the range of data sources upon which investigators can focus their work has inevitably been limited. Within the last decade, however, educators have begun to ask broader and more open-ended questions ("What does it mean," for example, as opposed simply to "Is it true?"), and to use "naturalistic" approaches to their inquiries as alternatives to empiricist research methods.

The further researchers move away from studying directly observable behavior, the more creative their approaches must be to gaining knowledge. When dealing with the complexities of human nature and, in particular, the more specialized areas of adult development and adult learning, the greater the variety of data sources which should be utilized. Since the questions we ask about adult development and learning are questions of meaning, of understanding, and of inner experience, the most appropriate data bases are records of such experiences. These "records" are found in documentary sources such as diaries, case histories, autobiographies, memoirs, and fictional literature. As Wolf and Tymitz (9:12) have observed, this type of inquiry focuses upon "slice of life" episodes documented in "natural language, and representing as closely as possible how people feel, what they know, how they know it, and what their concerns, beliefs, perceptions, and understandings are."

The differences in approach and data sources between traditional research and naturalistic inquiries can be likened to the differences between studio portraits and action photography. In studio photography, subjects are arranged and manipulated in a contrived setting. Individuals and groups pose only to be photographed; pictures taken under these conditions are truthful representations of a carefully controlled environment, one which does not exist outside of the studio.

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*Adult and Continuing Education, 101 Gabel Hall, DeKalb, IL 60115
**Division of Continuing Education, East Hall, George Mason University, Fairfax, VA 22030

Naturalistic inquiry presupposes a different set of conditions. Consider a newspaper photograph taken during a sports event. Not only would the event have occurred without the photographer's presence, it is not altered by the fact that it is being recorded. The sports photograph, of course, differs from the studio photograph in another important aspect. In contrast to the carefully arranged and non-distracting background of the studio, the sports photograph (or film in the case of television's instant replays) is often filled with ambiguities and other "information" which may well be irrelevant to the intended focus. Furthermore, if the viewer wishes to use the photograph as "evidence" to provide answers to particular questions ("Was the shooter fouled?" or "Was the receiver out of bounds?" for example) he or she must sort out the hodgepodge, sifting though the ambiguities, and deciding what is relevant and what is irrelevant to the purpose of the inquiry.

So too with the researcher focusing upon documentary sources. He/she also must sort out the ambiguities, separating the relevant from the irrelevant with respect to a particular research purpose. On the one hand, this difficult task may be regarded as the price for naturalistic research, the price of collecting data as it exists in its "natural" environment removed from the controlled conditions of the laboratory. On the other hand, this very set of circumstances is naturalistic inquiry's greatest attribute. Particularly in such areas as the adult development and learning of human subjects, the researcher cannot make judgements about relevance until these subjects are encountered in the actual environments in which they live and work.

In either naturalistic or traditional research, of course, the bias or shortsightedness of the researcher may limit the value of the results. Neither type of inquiry escapes this risk; the risk merely occurs at a different stage of the investigation. While the naturalistic inquirer may distort reality as his or her study progresses, the traditional researcher may have already done so by the pre-arrangement of fixed research questions and rigidly controlled "laboratory" conditions.

The selection of appropriate data sources thus hinges upon the questions asked and the approach used to answer them. The fact that researchers have made little use of documentary materials is not important. A potential data source is not evaluated upon the extent of past use, but rather from the perspective of the following two questions:

1. Does this source contain information or insight relevant to the researcher's interest?
2. Can knowledge and understanding from this source be acquired in a reasonably practical and yet systematic manner?

Provided that these two questions can be answered in the affirmative, research questions may be investigated through the use of any data source.

Despite the obvious potential of documentary sources as aids to knowledge and understanding, they have encountered the skepticism of many traditional researchers who are concerned with questions of validity, reliability, and generalizeability. As noted earlier, a naturalistic inquiry into the meaning of some aspect of adulthood presupposes somewhat

different assumptions seeking different kinds of answers to different kinds of questions than would be found in a conventional inquiry. The question could thus be raised as to the appropriateness of judging data sources used in naturalistic inquiry by the same canons as those used in traditional studies. This caveat not withstanding, documentary sources commonly used in naturalistic inquiry do, in fact, fair well when viewed in terms of the benchmarks of traditional research. The remainder of this article will discuss how the concepts of validity, reliability, and generalizeability can be applied to research involving documentary data sources.

Validity and Reliability

In considering the use of "subjective" documents such as autobiographies, personal accounts and such, two questions arise: (1) how "valid" is the documents' account of reality and (2) how "reliable" is the researcher's interpretation of the data? Addressing both of these questions becomes easier if one is open to the idea that there may be many truths, or many perceptions of reality. This is especially the case when a researcher is dealing with non-observable behavior, inner meanings and experiences characteristic of questions in adult development and learning.

Indeed, one-of-a-kind documents or personal accounts of an experience may be the only access we have to the inner workings of the human mind and emotions. Such documents "anchor a discipline in the bedrock of human experience" (1:191). The "truth" of such sources depends upon who we are, what questions we ask about it, and the conclusions we draw from it. We can, for example, read the Autobiography of Malcolm X and draw some inferences about black-white relations, the "truth" of which would be skewed by Malcolm X's perception. On the other hand, we could gather some accurate insights into the process of adult learning, especially that which takes place in non-school settings. Becker (2) in a fascinating discussion of the validity of photographs, makes these points about "truth":

> (1) The truth need not be the whole truth. It is irrelevant to criticize the assertion we have extracted from a picture because there is some other assertion it will also support, unless the two assertions are contradictory....
> (2) We generally decide important questions on the basis of all kinds of evidence....
> (3) We can never be absolutely sure of the truth of an assertion. Our knowledge is always partial and therefore fallible: we may find a new piece of evidence tomorrow which will show us that the assertion we thought true is, after all, false....
> (4) No single standard of proof is acceptable for all social groups and all purposes. (2:106-107)

Even though "truth" is relative, partial, and subject to reinterpretation, it still behooves us to make every effort to establish the validity of a document with regard to our specific purposes. The validity of "soft" data sources can be assessed by operating on the assumption as we do in other aspects of life, that the document is an honest account to

the best of the author's ability, by deciding if the account is plausible in terms of our own experiences, and by applying the test of internal consistency or self confrontation; that is, "a document that hangs together, that represents a structural configuration of human life and harbors no impossible contradictions has at least prima facie validity." (1:128)

Several writers (6,7) have also proposed that whenever possible, additional verification of the document should be obtained. This may involve assessing other pertinent materials, interviewing key people related to the experience, and seeking expert advice as to the document's authenticity.

The reliability of a researcher's interpretation of "soft" data may also come into question. As opposed to the rigorous guidelines for interpreting and generalizing from "hard" aggregate data, only recently have researchers been given help in assessing the reliability of their findings with non-quantitative data. Guba (6) suggests member checks -- returning findings to the sources from which they came for verification (sometimes possible with documents if authors are accessible), and leaving an "audit" trail so that another judge or team of judges can verify that the findings make sense in view of the data.

In addition to considering the validity of documents and the reliability of the researcher's interpretation, there is a concern with the validity of the findings generated from "soft" data sources. Glaser and Strauss (5) point out that theory "grounded" in and emerging from the data has a better chance of ringing true or being credible that one developed a priori. The credibility of findings based upon qualitative analysis of documents cannot be judged the same way that findings are evaluated in scientific research. Eisner (4) writes:

> Validity in the arts is the product of the persuasiveness of a personal vision; its utility is determined by the extent to which it informs. There is no test of statistical significance, no measure of construct validity in artisitically rendered research. What one seeks is illumination and penetration. The proof of the pudding is the way in which it shapes our conception of the world or some aspect of it. (4:6)

As with theory based on "hard" quantitative data, theory based on "soft" data stands until confronted with convincing contradictory evidence.

The Generalizeability of Results

Using case histories, dairies, public and private accounts of happenings or autobiographies is to open oneself to the criticism that such material is idiosyncratic and not representative of a larger population; therefore, one cannot "generalize" from the particular document to other cases. There are several points to be made here, however. Even with random sampling, generalizing to the population is done within a certain level of confidence, and outlying scores are ignored (they become part of the error variance) in the making of such generalizations. Allport (1) vividly points out the fallacy in applying statistically based generalizations to individual human beings:

> Where this reasoning seriously trips is in the prediction applied to the single case instead of to a population of cases. A fatal non sequitur occurs in the reasoning that if 80 per cent of the delinquents who come from broken homes are recidivists, then this delinquent from a broken home has an 80 per cent chance of becoming a recidivist. The truth of the matter seems to be that this delinquent has either 100 per cent certainty of becoming a repeater or 100 per cent certainty of going straight.... His chances are determined by the pattern of his life and not by the frequencies found in the population at large. (1:156)

Allport also makes the case that in many fields such as psychology and psychiatry, education and social work, predictions for individuals based upon idiographic information are far more accurate than those made from large numbers of cases (1:160). Furthermore, Cronbach points out, statistical generalizations "decay." For example, "an actuarial table describing human affairs changes from science into history before it can be set in type" (3:23).

Eisner, in a recent article comparing scientific and artistic approaches to research states that it is possible to generalize from a single case because "the general resides in the particular and because what one learns from a particular one applies to other situations subsequently encountered" (4:7). Furthermore, people cope with the world about them not through random selection, but by generalizing from particular experiences.

This notion that the general lies in the particular is easily illustrated by noting how certain documents, though unique, transcend the particular situation and offer insights into human nature in general. The Nixon Tapes, for example, record the particular doings of a particular president at a particular historical time. They also tell us much about power as a human motivator. Similarly, Admiral Byrd's report in Alone of his experiences at the South Pole in the winter speaks to a person's ability to cope with a harsh environment and lack of human contact. Large numbers of people have neither been president nor to the South Pole, but many have been power driven and alone.

To summarize, Reichardt and Cook write that "there is no reason why quantitative results should be inherently more generalizable than qualitative results." Only in the world of statistical rigor is knowledge generalized from sample data. In reality, "generalization is far more informal . . . more inductive." (8:15)

Conclusion

We conclude by reiterating that the purpose of research is to contribute to knowledge. The methodology and data sources appropriate to any inquiry are dependent upon its purposes. In the areas of adult development and learning the intent of research is seldom confined to observable behavior. More often, the real focus is upon the complexities of human nature as it functions in a full life perspective. More than fact, the researcher seeks understanding. Where better to seek this understanding than in the documentary records of human experience?

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I. Learning and Teaching Styles of Adult Education Teachers

Allen B. Moore, University of Georgia

II. Introduction

Have you ever thought about how you learn? As teachers or managers or workers you may be concerned with how well you do your job...but how did you learn your job? What methods helped you learn the most about your job? What's your learning style?

If you are a teacher, trainer, manager or supervisor, how have you taught others to perform their job? What style or method do you use to aid others in learning? What's your teaching style?

Adult education teachers, in a "field setting," were asked to respond to two instruments about their learning and teaching style. The learning style inventory (LSI) was developed by Kolb (1976) as a means of identifying characteristics about learning. The teaching style inventory (TSI) was developed by Brostrom (1979) to identify those activities that you, as a teacher or trainer, actually do with a group of youth or adults.

Learning Styles

In this study, learning style, as measured by Kolb's (1976) Learning Style Inventory (LSI), will be used to identify a person's abilities to "....involve himself fully and openly in new experiences (concrete experience abilities), he must be able to consider these concepts from many perspectives (reflective observation abilities); he must be able to create concepts which integrate his observations into sound theories (abstract concept utilization abilities) and then he must be able to use these theories to make decisions and solve problems (active experimentation abilities)" (Pigg, Bush, Lacy 1980, p. 234). Kolb's learning style (1976) concept is based upon the work of social psychologist Kurt Lewin and experiential learning theory that is grounded in 4 areas "...immediate concrete experience (1) is the basis for observation and reflection (2). These observations are assimilated into a "theory" (3) from which new implications for action can be deduced (4) (Kolb, p. 3)." Learning, in this context, requires abilities that are polar opposites (concrete - vs - abstract and active - vs - reflective) and choices must be made between these options in any given learning situation.

Teaching Styles

Brostrom submitted the Training Style Inventory (TSI) to Jones and Pfeifer who published it in the 1979 Annual Handbook for Group Facilitators. Personal communication with Brostrom (1981) indicates that the inventory could also be called a "teaching" style inventory. Brostrom suggests that the 4 teaching styles, behaviorism, functionalism, structuralism and humanism are theoretical models that have origins with such theorists as Skinner (1974), McClelland (1976), Mager (1975) and Rogers (1969) respectively. Brostrom's inventory (TSI) is composed of questions regarding 15 topics having 4 questions each regarding teaching and training. Responses to each group of questions are scored according to the four teaching styles

Author's address: Allen B. Moore, Assistant Professor, Department of Adult Education/ICAD, 422 Tucker Hall, University of Georgia, Athens, Ga. 30602 (404) 542-2214.

A telephone conversation with Brostrom (1982) indicates that the teaching style inventory (TSI) follows Jung and Piaget learning theories in that: (1) teaching styles can be designed to assist the learner perceive stimuli from his environment (behaviorist); (2) when these stimuli are received the individual (i.e., passively) encodes, decodes and classifies them into bits of information (Structuralist); (3) the bits of information are then assigned (i.e., active learner involvement) value, meaning and significance so that interpretation of data can be made (Functionalist); and (4) information is processed, tested, summarized and related to personal experience (Humanist).

Teaching and Learning Styles

Are teaching styles related to learning styles? If it can be determined that a person learns in a particular way or style what are the implications for teaching?

Kirby (1979, p. 89) believes "...it is vital for people to know their own personal cognitive or learning styles, it is doubly important for teachers to know their own teaching styles and where this may or may not differ from personal style." Gregoric (1979a) examines learning and teaching styles and cautions the amateur or person wishing to ride the "styles" bandwagon to beware. An analysis of styles, both teaching and learning, is a complex process best left to the professional who understands phenomenological research. Gregoric (1979b) has developed a learning style instrument similar to that of Kolb (1976) and has correlated his instrument with that of teacher behavior observations. Two findings of Gregoric's (1979b, p. 25-26) studies indicate that: (1) Learning style consists of behaviors which give clues as to the mind-qualities an individual uses to interact with his environment and to gather and process data from it; and (2) Teaching style consists of the teacher's personal behaviors and media technologies chosen to deliver and receive information.

Hypotheses

Based upon a review of the Kolb (LSI) and Brostrom (TSI) instruments, it was hypothesized that the following relationships (i.e., directional hypotheses) would be found among the adult education teachers:

	Learning Style	Teaching Style
H_1:	"Diverger" learners	should have a "humanist teaching style. Divergers are characterized as generators of ideas, brainstormers and having imaginative ability. Humanists are characterized as being open, spontaneous and helpful. Both divergers and humanists are cited as being the "counselor" type.
H_2:	"Accommodator" learners	should have a functionalist" teaching style. Accommodators are "doers" and action oriented. Functionalists are noted for being assertive and builders of confidence. Each style has been characterized as "risk takers."
H_3:	"Converger" learners	should have a structuralist teaching style. Convergers are noted for seeking practical applications of ideas and for their technical interests. Structuralists have been characterized as being expressive, informative and organized.

H_4: "Assimilator" learners should have a behaviorist teaching style. Assimilator learners tend to be planners and have interests in abstract concepts and model building. Behaviorists tend to be in control and deliberate in their style of teaching.

III. Methodology

The learning and teaching instruments (LSI and TSI) were administered, in a field setting, to approximately 200 adult basic education teachers attending workshops at 5 locations (Albany, Atlanta, Dalton, Macon and Waycross) in Georgia. Each instrument was completed prior to participating in workshop activities.

For the LSI, participants are asked to rank 9 sets of 4 words each regarding how they liked to learn. These ranks were tabulated and scores derived which were plotted on a grid. The quadrant on the grid identifies the particular learning style or group.

The TSI has 15 categories with 4 statements for each item. Each respondent was asked to rank (1,2,3, or 4; 4 is high, 1 is low) the teaching activities within each category. A scale is derived for each of 4 teaching styles. Data were analyzed using non-parametric rank statistic analysis of variance based upon the Friedman model (Marascuilo and McSweeney, 1977, p. 360).

IV. Findings

All of the participants were engaged in teaching adults and are referred to as "teachers." Two-thirds (67%) of the teachers are female. The majority of teachers (73%) were between the ages of 21-50. Four out of five (18%) teach part-time. Teachers appear to be divided into two main groups regarding their work location...city (41%) and rural (43%). Most of the teachers had two or more years experience at teaching adults.

Data in Table 1 indicates that for 3 learning style groups (i.e,, diverger, accommodator and converger) the null hypotheses are supported for this study group. The assimilator learning style appears to be strongly related to the behaviorist teaching style and the null hypotheses is rejected.

V. Conclusions and Discussions

The most obvious conclusion for this field test study is that of the four hypotheses about certain learning styles being associated with specific teaching styles only one could be supported by the data. The means of ranks in Table 1 provide visual evidence that in each of the first three learning style groups the hypothesized teaching style is obviously not ranked significantly higher than the other teaching styles. Only in the fourth group (assimilators: behaviorist) are means of ranks significantly higher for the behaviorist teaching style compared to the other styles.

Because of the interesting pattern displayed by the data (i.e., behaviorist ranked highest by all learning style groups) it was felt that further post hoc analyses might help explain teacher preferences and more importantly lead to new research hypotheses. Post hoc results are found in the right hand part of Table 1.

Post Hoc Comparisons

The hypothesized teaching style was compared to all other styles in a post hoc fashion. From the computations (i.e., Friedman Model χ^2 1df .05 = 3.84) it is noted (i.e., yes/no) if the pairwise contrast is rejected. The contrasts for both the diverger and accommodator in sets of 1 & 2 do not have consistent "yes" rejections. For the converger teaching style all contrasts are rejected in Set 1 because of the low value (i.e., least preference) for the structuralist teaching style. Assimilator learners prefer the behaviorist teaching style significantly more than they do the other teaching styles and this is confirmed by the rejection of pairwise comparisons. However, it should be noted that the structuralist contrast is rejected in all post hoc comparisons indicating that the structuralist teaching style is least preferred by the teacher group.

The post hoc findings are consistent with principles of learning and conventional wisdom regarding teaching adults. Gibb (1960, p. 54-64) points out that learning must be: (1) problem-centered; (2) experience centered; (3) meaningful to the learner; (4) related to learner identified goals; (5) open to review; and, (6) a feedback mechanism for the learner regarding progress toward goals. Conventional wisdom (Knowles, 1970, p. 52-53) regarding conditions for adult learning states that learners are: (1) ready to learn; (2) participate more fully in a learning environment of physical comfort, mutual trust and respect, mutual helpfulness, freedom of expression and acceptance of differences; (3) active participants in the learning process; (4) involved in the process of planning and operating the learning experiences; and (5) aware of sense of progress toward their goals. Some of these principles and conditions are found in each of the teaching styles. However, when teachers were asked questions regarding their preferences for a particular condition or activity, they ranked the behaviorist related items higher than others. Therefore, regardless of learning style, the responses to the teaching style inventory indicate teachers provide adult learners with security, trust, patience, and a protective environment for learning (i.e., behaviorist strengths). At the same time, teachers indicate the least orientation (i.e., lowest rank) for inflexible structures which may not meet the learners' individual needs or goals (i.e., structuralists).

More research is needed to test the viability of these post hoc observations. Studies might include further research into learning styles and the ability to differentiate between styles. Given that adult education teachers in this study prefer the behaviorist style and rank the structuralist as the least preferred style, would these hypotheses hold for another teacher or trainer group? More data are needed on the reliability of these two instruments for professionals in teaching and training positions.

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Table 1 Summary Data: Learning Style Inventory (LSI)
and Teaching Style Inventory (TSI)

Learning Style Group	n	Hypotheses	Confidence Interval	Mean of Ranks for Teaching Style				Post Hoc Pairwise Contrasts			
								Set 1		Set 2	
				B	F	S	H	Contrasts	Reject	Contrasts	Reject
1. Diverger	56	H_1: Group 1=Humanist (H > B & H > F & H > S) HO: (Null) 3H-B-F-S ≤ 0	.893±1.67 Accept Null	2.89	2.45	1.96	2.72	H=B H=F H=S	no no yes	B=F B=S B=H	no yes no
2. Accommodator	25	H_2: Group 2=Functionalist (F > B & F > S & F > H) HO: (Null) 3F-B-S-H ≤ 0	1.20±2.72 Accept Null	3.18	2.80	1.62	2.40	F=B F=S F=H	no yes no	B=F B=S B=H	no yes yes
3. Converger	29	H_3: Group 3=Structuralist (S > B & S > F & S > H) HO: (Null) 3S-B-F-H ≤ 0	-4.3±2.11 Accept Null	3.22	3.02	1.41	2.34	S=B S=F S=H	yes yes yes	B=F B=S B=H	no yes yes
4. Assimilator	55	H_4: Group 4=Behaviorist (B > F & B > S & B > H) HO: (Null) 3B-F-S-H ≤ 0	3.05±1.52 Reject Null	3.26	2.48	1.98	2.27			B=F B=S B=H	yes yes yes

χ^2 1df .05 = 3.84

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ADULT EDUCATION IN HARLEM DURING THE GREAT DEPRESSION

Charlotte T. Morgan*
Herbert H. Lehman College of the
City University of New York

INTRODUCTION

Designing an effective adult education program for the black community during the Great Depression was made even more difficult by the pre-existing gap between opportunities within the black community and those available to the larger society. Federal intervention was crucial: it reduced the danger of further deterioration of this limited access and intensified efforts on behalf of black people. These attempts to close the gap raised questions with regard to the determination of the needs of black adults and the implications thereof for educational programs. Were the needs of black adults unique? Did they require a different curriculum? Were separate classes mandated? The perceptions of public and private educational policy makers in response to these questions helped influence, but did not determine, program design. Institutional mission and the social climate proved to be equally powerful forces.

FEDERAL ADMINISTRATORS AND BLACK ADULT EDUCATION

Prior to the Depression, government initiative in programs devoted to adult education for nongovernmental employees was limited. The economic crisis precipitated a new era: four federal agencies became heavily involved in the administration, supervision, and implementation of educational programs for the general populace. Three of these agencies--the Office of Education (OE), the Works Progress Administration (WPA), and the National Youth Administration (NYA) quickly appointed Blacks to oversee programs for their racial constituency. A fourth agency, the Civilian Conservation Corps (CCC) was paramilitary in nature. Consequently, black leadership possibilities were restricted by the agency's adherence to traditional army custom.

The OE appointed Ambrose Caliver, a former dean of Fisk University, as its first senior specialist in the education of Blacks. In 1930, Dr. Caliver convened the National Advisory Council on the Education of Negroes whose original purpose was to interpret educational needs and serve as a liaison with the black community. By 1933, Caliver advocated a philosophy of education which included teaching black history to all racial groups in order to encourage personal and racial pride, increase appreciation of the contributions and potential of Blacks, and highlight the place of Blacks in American society. In an era which often equated needs meeting with inequality in educational design, Caliver and other black educators stressed educational objectives. In 1938, he wrote that though the needs of black adults were greater, their educational objectives were the same as that of other groups--integration into American society and enhancement of the national culture.

The WPA inherited the educational program of the Federal Emergency Relief Administration. Basic to the revised program were literacy education, general adult education, parent education, workers education, camps for unemployed women, vocational education, and vocational rehabilitation. James A. Atkins of the Negro Education Division was both an advocate for black people and program trouble shooter. His concept of education placed an emphasis on

* Charlotte T. Morgan, Assistant Professor, Department of Black Studies, Herbert H. Lehman College of the City University of New York, Bedford Park Boulevard West, Bronx, N.Y. 10468.

"tool subjects" which would help people meet the demands of everyday life. His views on the place of Blacks in WPA and the application of his concept in program development were outlined in 1938. Atkin's educational philosophy (1940) emphasized the greater handicaps of Blacks, their immediate needs and interests, and special training of adult education teachers. Like his colleague in the Office of Education, his objective was "integration into American society."

The NYA served single adults living with parents who were on relief. Its office of black concerns was headed first by Juanita Sadler and later by the more renowned Mary M. Bethune. Mrs. Bethune, the founder of Bethune-Cookman College and the only woman in Roosevelt's "black cabinet," was an exceptional person who enjoyed enormous personal prestige. These attributes did not, however, prevent disenchantment with her division. Critics (Daniel and Miller, 1938, pp 364-65) claimed that it encouraged dependency and responded inadequately to the needs of black youth.

The CCC, unlike the NYA, enjoyed an enviable reputation despite segregation in personnel and workcamp sites. It was praised by Dr. Alain L. Locke (1936), then an American Association for Adult Education (AAAE) consultant and member of its Council of One Hundred, as "the most effective government program in existence." In defense of its discriminatory hiring policy, Oxley (1938), CCC educational director, asserted that white officials were in a "naturally strategic position" to better interpret the educational needs of black enrollees. He believed that, with the exception of some "peculiarities," black educational problems were the same as those of whites. The "peculiarities" noted involved in part the necessity to "adjust" the enrollees to the contemporary situation. In practice, adjustment could run the gamut from reducing occupational aspirations and accepting the status quo to encouraging critical thinking and advocating change. After several years of concerted pressure, black educational advisors and local administrators were finally hired.

PRACTITIONERS AND BLACK ADULT EDUCATION

Although government sponsorship brought adult education to large numbers of black people, its temporary nature and discrimination by local agencies meant that sustained black participation would require other forces. Locke and Eugene Kinckle Jones, executive secretary of the National Urban League, tried without success to get the AAAE to staff an office for the promotion of adult education among Blacks. Their efforts were discouraged by the organization's leaders who advocated "imitation" rather than actual "stimulation." The Association's reluctance was rooted in its director's interpretation of adult education's purpose. Morse Cartwright's (1935, pp. 37-39) short history of the adult education movement explained his position. He wrote that he was opposed to the concepts of adult education for "righting an educational wrong" or "securing for the underprivileged that which had been withheld." Nevertheless, the Association did give financial support to an interracial organization, the Associates in Negro Folk Education, whose purposes were the promotion of adult education and black history and the publishing of textbooks on black history, race relations, and adult education.

Black educators saw adult education as a tool for just what Cartwright opposed. They were careful, however, to be precise about the specifics of black educational needs in order to weaken older, racist assumptions which alleged that differentiation was necessary because of black racial inferiority and inability to profit from the same education provided for whites. Locke (1934) cautioned that too much attention to defining specific black

needs would lead to a reduction of educational quality. At the 1938 conference of the Associates for Negro Folk Education, he spoke out against the growing emphasis on remedial programs for Blacks and other so-called disvantaged persons. He called instead for a more humanistic content which focused on the broadening of social values and the enlargement of the adult's horizon.

For many educators, a black adult education curriculum required black history. Proponents (Locke, 1934, p. 420) argued that the proper use of racial themes would be of value to all sectors of American society. Ira De Reid (1936, pp. 12-17), industrial secretary of the New YorK Urban League, recognized the political value of such a curriculum for those interested in assisting Blacks in the development of appropriate responses to the problems of discrimination and segregation. Carter G. Woodson, founder of the National Association for the Study of Negro Life and History, devoted his life to the promotion of black history and its incorporation into the educational mainstream. He soon despaired of the ability of mainstream institutions which, in his opinion, "mis-educated" Blacks. In his critique (1933), he called for adult education institutions to awaken "the masses" to "new economic and cultural viewpoints." These new "viewpoints" were the goals of many adult educators. However, the adult education programs subsequently offered were black only to the extent of the inclusion of black history and culture. Segregation in terms of participation or differentiation in terms of type was not usually accepted. Government officials believed that Blacks needed adult education to "adjust to democratic life," to reduce illiteracy, and to overcome handicaps. The failure of society to take steps to remove the greatest handicap, discrimination, was seldom considered, and programs which challenged the status quo were usually short-lived.

ADULT EDUCATION PRACTICE IN HARLEM

In Harlem, private agencies were the primary providers of adult education until 1935. The entry of the government through the WPA changed this pattern: It made possible the ascendancy of the board of education, briefly revived church efforts, and instituted new programs.

Public Programs

Board of education opportunities for adult education were offered under two categories--that of the traditional evening school and that of the WPA. According to New York Age (1927-1941) reports, the traditional program experienced little growth in either curriculum or sites. Elementary subjects, skills courses open only to women, naturalization classes, and literacy education remained the norm. One exception was the opening of Harlem Evening High School to the black community. There, for the first time (New York Age, 30 January 1937) a black history course was offered in a City school.

The WPA came to Harlem after the 1935 riot. Under board of education auspices, the government offered programs in 35 centers housed at churches, community centers, political clubs, libraries, schools, and voluntary associations. The 46 courses made available were primarily vocational and open to all (trade classes were the exception) over the age of 17. During the peak year of 1939, the spring enrollment exceeded 10,000, which was eight percent of the City total of 120,000. The "government university," as the WPA program was called, was considered vital to the rehabilitation of Harlem's unemployed and hailed as the community's "lifesaver."

Between 1936 and 1939, the WPA co-sponsored forums with unions, civic clubs, settlement houses, and neighborhood associations. In Harlem, more than 122 such groups hosted this popular and often controversial activity.

Eventually, the dissent engendered by the unrestrained discussions led to cancellation by the cost-conscious and conservative WPA administrator, who substituted public lectures under board of education sponsorship.

Special segments of the general adult population were served by three other federal agencies. The CCC offered a workcamp experience to black males in two categories--juniors between the ages of 17 and 23 and veterans in their 30's and 40's. Many of the black camps were more isolated and less well supplied than integrated or white camps. The undereducated enrollees were subjected to paternalism and disdain by educational advisors who had limited understanding of their needs and aspirations. Gradually, such advisors were replaced. Camp Breeze Hill (upstate New York) became one of the nation's best CCC facilities. It was built for Blacks from New York City and its program included diverse educational offerings that reflected the best elements of the Harlem community. Programs at other black camps stressed vocational counseling and job training, with instruction limited to proven areas of black employability.

The NYA's educational program grew out of the need for social control. Eligible young adults (ages 16-25) performed tasks ranging from maintenance to clerical. In the black community, the NYA was relief-oriented: its programs stressed training and service rather thaneducational achievement. The Young Women's Christian Association (YWCA) of Harlem supervised 500 young adults who attended conferences and short training courses meant to expand their skills. Other special training services were not maintained until a multi-shop center was established in Queens in 1939. In the meantime, NYA participants were told to attend WPA adult education institutes or regular public evening schools.

The third and final federal project was worker's education. Its general purpose was the stimulation of interest in economic problems and their solution (Carter & Smith, 1934). Classes in labor economics, theater, English, and black history were brought to Harlem as a result of the efforts of the Harlem Workers' Council (formed under the sponsorship of the National Urban League). The federal program operated for four years before it was absorbed by the board of education. While in operation, the program met with hostility and suspicion from public school administrators who supported more traditional approaches and leftist radicals who feared government involvement in union developments. Recruitment efforts failed to attract students and the worker education classes maintained an attendance consistently lower than other emergency education programs (Campbell, Bair & Harvey, 1939, p. 94).

Private Programs

The education of Blacks for success in employment had always been a concern of the National Urban League. However, the multiple needs of urban migrants relegated formal education programs to a secondary role. With the onset of the depression, the Urban League once again became an adult education agency. In Harlem, the New York Urban League supported vocational classes and an arts center (funded by the Carnegie Corporation), as well as administered state-funded courses. Reid's report (1936, pp. 43-44) notes that 4,650 students were enrolled in these courses. The League's prominence in general adult education ended with the introduction of WPA programs under board of education auspices. The League's other interest, improving black participation in organized labor, led to the founding of Workers' Councils. The Harlem affiliate aggressively promoted federal workers' education and its own study circle. League historians, Parris and Brooks (1971, p. 260), report that this council, and over 70 others organized nationally, were particularly useful as study groups for learning protest and organizing techniques.

The YWCA's major educational activity was its accredited trade school which offered the largest "Y" program in the City. Courses were opened to women and eventually to men in household science, office skills, dressmaking, practical nursing, and beauty culture. Outside of the trade school format, adults were offered conferences, lectures, study groups, and forums in areas as diverse as black history, religion, speech, and personal relationships. By the end of the 1930's, the programs in the non-occupational division were replaced by defense-related efforts. On a national level, another more significant change was occurring: though still segregated, the YWCA proposed to develop race relations projects.

Arthur's 1934 study of black Young Men's Christian Associations (YMCA's), which cited the Harlem "Y" as surpassing all others, is misleading since few of the programs were actually supported by the "Y." The YMCA's image as a leader in adult education rested more on past laurels than on contemporary developments. The sponsored classes reflected a potpourri of interests lacking both sequence and philosophy (African history, religion, and sales). These limited offerings were further reduced when the YMCA, like its counterpart, reacted to the growing interest in defense.

Private philanthropy rather than government initiative financed. Of the ones serving the area, the West 135th Street Branch Library (which housed the now famous Schomburg Collection) was the most active. Its association with the leading figures of the Harlem Renaissance gave it a prominence which was further extended by a grant from the AAAE in 1932. Reid's (1936, pp. 40-41) profile of the two-year experiment described its extensive program in the arts, politics and government, music, literature, and black history. Although it received many accolades, the project exhibited a failing common to many adult education programs: it did not attract the ordinary citizen. After the experiment, classes, forums, and occasional lectures were conducted sporadically and in less volume. With the retirement of the branch librarian and new administration at the central library, commitment to adult education wavered (Monroe, 1963, pp. 310, 351) and the role of the branch was greatly reduced.

The adult education efforts of Harlem-based clubs, study groups, cultural and civic associations, churches, and independent schools supplemented and competed with those of local and national public agencies and voluntary associations. These community organizations held regularly scheduled debates, lectures, classes, and discussion groups on local politics, black history and culture, vocational development, and economic survival. A few of them, for example, St. Mark's Lyceum, organized in 1881, enjoyed enviable reputations. Independent schools met varied fates. Art centers such as the Mwalimu School flourished, while commercial and trade schools faced extreme pressures from WPA programs. The newest among the former were the least likely to survive.

CONCLUSION

Going to school to find a way out of the doldrums of the Depression occupied the time of many of Harlem's unemployed. In the midst of want, there was an abundance of activities planned to cause forgetfulness or acceptance, and occasionally, change. Anthough there was recognition of the distressing circumstances of black life, programs addressed the smyptoms rather than the causes. With few exceptions, consideration of race relations was handled gingerly or left to sidewalk orators. The actual translation of adult education goals such as self-determination and self-actualization into program design proved difficult. Instead, control of the population became an unmistakable element. It was no accident that Harlem was swamped by adult education

endeavors after the riot of 1935. Yet, by the close of the 1930's, a state commission (New York State, 1939, p. 159) reported that relief from the conditions associated with the disturbance had not been obtained. In the early 40's when America was about to engage in another war for democracy abroad, there was precious little of it for millions at home. Adult educators seemed unaware of the disparity when they spoke of the need to use education to protect the ideal of democracy to groups which had not equally received its benefits.

Federal funding changed the direction of the adult education movement among Blacks: it restructured sponsorship and curriculum, gave employment to teachers, and provided previously unavailable experiences for students. For adults in Harlem, a world of opportunity, albeit imperfect, was made available.

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ASIATIC IMMIGRANTS LANGUAGE PROFICIENCY SIX MONTHS AFTER A THIRTY-WEEK LANGUAGE PROGRAM

Gisèle Painchaud
Alison D'Anglejan
University of Montreal

The problem

Learning the language of the land is certainly one of the first tasks to be tackled by a newly arrived immigrant. This is so well recognized that in many countries language teaching programs are part of a larger number of services offered to immigrants in order to facilitate their social and professional integration. Quebec is no exception to this trend. Its cultural policy states explicitly the importance of maintaining language teaching programs for immigrants because the "initial period of adaptation determines to a great extent whether immigrants will integrate or not to the francophone society". More dramatically stated, a person who cannot speak French adequately will be denied access to the better jobs and will therefore be unable to earn a decent living and take her rightful place in society.

The Quebec Government has set up language schools where immigrants can learn French within a thirty-week intensive program (30 hours a week). Immigrants vary in ethnic origin, mother tongue, age, degree of schooling, etc. Results of a recent study (D'anglejan, 1978) showed that after thirty weeks of intensive instruction, from 15 to 25% could hardly understand and express themselves even at the most elementary level. The analysis of the data demonstrated that psychological and social variables could explain the variation in the degree of success rate.

Studies conducted in Europe (Dittmar, 1980; Meisel, 1980,) in the United States (Cancino, Rosansky, Schuman, 1977), in Africa (O'Banya, 1976) and elsewhere showed that learning could occur without formal instruction provided the immigrant had the opportunity to interact with native speakers within the context of work or leisure. It seems social variables such as degree of contact with native speakers, in conjunction with psychological variables such as attitude and motivation, are conducive to language learning without formal instruction. However, these immigrants speak a pidginized form of the language whose main characteristics are rudimentary

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Gisèle Painchaud, Ph.D., Assistant Dean, Faculty of Education, University of Montreal, C.P. 6203 - Succ. A, Montréal, Qué. Canada H2C 3T3

syntax and lack of morphological markers. Dittmar concluded, after studying the acquisition of German by immigrants, that formal instruction should be offered. D'Anglejan's conclusion was that formal instruction was not sufficient to ensure a good mastery of the language. It thus appears that both formal instruction and informal learning are required for successful language learning by immigrants.

The objectives of our study were the following:

- to identify the level of language proficiency attained after thirty weeks of formal instruction by newly arrived immigrants;

- to establish whether after a period of six months in a work environment the level of proficiency attained after the end of the formal language instruction had remained the same, increased or diminished, taking into consideration the descriptive variables of the work environment and other opportunities of contact with the French language.

Method

Subjects

In January 1981, when our research started, the immigrants taking the French language course offered in Government schools originated mostly from South-East Asia and many of them were political refugees. Our 53 original subjects were Vietnamese, Sino-vietnamese, Cambodgians, Laotians and Chinese. They had completed from 27 to 30 weeks of formal instruction in French. They had decided to settle in the Montreal Metropolitan region. They were volunteers who had agreed to be interviewed a second time six months later.

Data collection

According to Burt and Dulay (1981), the tests used for collecting linguistic data can be classified in two categories: communication tests and linguistic manipulation tests. In a communication test, the subject's attention centers on what he communicates and less on the formal aspects of language. This distinction is important because in a natural setting, communicating content, the message, is the focus since there is usually no time to attend to the other aspects without risking a communication breakdown.

Since we wanted to assess the subjects' capacity to deal with communication in real settings, we chose a test measuring this type of ability. The Interview Schedule developed by the Foreign Service Institute seemed appropriate for own purposes. Although it is a subjective

measure requiring that a global evaluation be made of the subject's capacity to communicate, its internal and external validity are well established (Bachman and Palmer, 1981; Clark, 1979). More recently, an adaptation of this technique has been used successfully by Cancino and Hakuta (1981) with immigrants having a low degree of schooling.

Interviews were conducted by a graduate student in linguistic anthropology who was an experienced interviewer. She was made aware of the problems likely to occur with subjects having minimal proficiency in the second language, such as long pauses, breaks in communication, repetitions, the need to leave enough time to respond, etc. A pilot study was made with five subjects and listening to the tapes with the researchers, the experimenter became conscious of her behaviour during the interview.

In the first interview, information was gathered on age, degree of schooling, type of work in country of origin, languages spoken, use of French at home and elsewhere, length of time spent watching television and discussion of the programs. Subjects were also invited to speak about their arrival in Quebec, the kind of lodging they had settled in, the type of work they would like to do in Quebec, their social contacts, etc.

In the second interview, which took place six months after the first, the subjects were asked to relate what they had done since leaving the language school, the difficulties encountered in finding work. They were asked to describe their work environment and to specify the degree of contact they had with native speakers. Other themes such as organization of leisure time, problems related to the children being in a French school, politics in the country of origin and plans for the future were also introduced.

The experimenter was instructed to let subjects initiate any theme they wanted to during the conversation.

Data collection problems

Although precautions had been taken to retrace the subjects after the six months had elapsed by providing them with a pre-addressed post card to be sent in case of change of address, by sending a letter written in French and in their mother tongue reminding them of the second interview and telling them that the experimenter would contact them by telephone to set an appointment, 36 subjects only would be interviewed a second time. It was impossible to find trace of nine of them, either because they left the Montreal region or they moved without leaving their new address, five said they would come but never did, even though they were called back many times and three refused pretexting that their language proficiency was too low.

Results

Evaluation of subjects' language proficiency

Two experienced teachers of French, with training in linguistics, were chosen to evaluate the subjects' language proficiency according to the FSI levels. They were trained to use the scale from 0 to 5 (the five preliminary interviews were used for this purpose. However, since it was evident from the start that very few subjects would reach level 4 (near native ability), the lower end of the scale would be mostly used (0, 1, 2, 3).

To avoid any bias in the evaluation, the tapes were randomized. Each subject was evaluated twice for both interviews. The evaluations were done separately and the teachers were told they had different groups of subjects, although some subjects would be evaluated by the two teachers for control.

The coefficient of correlation obtained for the evaluations made for the first interview by the two teachers is .88, whereas for the second interview, it is .85. A two-tailed t-test was also conducted and there was no significant difference between the means. Two subjects were apparently difficult to evaluate but their scores were nonetheless included in the calculations.

Table 1
Description of subjects who completed the two interviews

- Ethnic origin

Vietnamese	9	25%
Cambodgians	9	25%
Lao	5	14%
Chinese and Sino-Vietnamese	12	33%
Other	1	3%

- Age

	F	%	Cum %
15 - 19	7	19	19
20 - 24	13	36	56
25 - 29	5	14	69
30 - 34	4	11	81
35 - 39	3	8	92
40 - 44	1	3	100
50 -	3	8	

Close to 70% of the subjects were under thirty years of age. There were 21 males (58%) and 15 females (42%).

Table 2
Distribution of scores according to FSI levels
for first and second interviews

First interview			Second interview		
Level	F	%	Level	F	%
1	8	22	1	4	11
+1	8	22	+1	6	16.6
2	9	25	2	16	44.4
+2	11	30.5	+2	10	27.8

We can see there has been a shift from the first to the second interview, with level 2 showing the largest increase. However, without a closer look at the data, these figures may be misleading. If we categorize the subjects' scores as gain, loss or same, we get a better idea of the distribution of the data.

Table 3
Subjects' scores according to FSI levels
distributed as gain, loss, same

Gain	N	Loss	N	Same	N
1 to +1	3			1 to 1	4
1 to 2	1			+1 to +1	2
+1 to 2	6	2 to +1	1	2 to 2	6
2 to +2	2	+2 to 2	3	+2 to +2	8
	T 12		T 4		T 20

Over 55% of the subjects interviewed showed no change in their level of French proficiency while 33% showed an increase of a half level. Only one subject increased one full level. Likewise, those who decreased in their language proficiency did so by a half level.

Discussion

The main conclusion to be drawn from this data is that contrary to some expectations, language proficiency obtained through formal instruction mostly remains stable after a period of six months or increases, in the case of Asiatic immigrants who accept to be retested. We obviously know nothing of the others who never showed up.

The next step will obviously be to look at the case studies of those who did increase their language proficiency during the six-month period following formal instruction in the language, compared, for instance to those who showed a loss during this same period. Since a large number of variables are involved in language learning, it will not be possible with such a small sample of subjects to confirm hypotheses. However, we hope to generate interesting hypotheses.

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ADULT PROBLEM SOLVING IN NON-FORMAL SETTINGS

John M. Peters[1]
The University of Tennessee

Introduction

Researchers and practitioners agree that adults attach great importance to the utility of what they learn in formal and non-formal settings. Motivational orientation studies (e.g., Boshier, 1976) as well as studies of self-directed learners (Tough, 1971; 1977) support the notion of a strong pragmatic orientation of adults who participate in formal and non-formal educational activities. The largely pragmatic orientation of adult learners suggests a close relationship between their learning activities and problems they experience. Thus, researchers interested in exploring the dynamics of adult learning could reasonably adopt a problem solving framework for their studies. If it can be assumed that learning results from an adult's attempt to resolve a problem, then focusing on the way adults solve problems may aid educators in better understanding the processes that lead to learning.

Of particular concern to adult educators are the special needs of non-literate adults.[2] This population presents a challenge to educators who wish to understand the personal and social forces that influence their ability to cope with daily living tasks. Although limited in its research evidence, the literature in adult education characterizes the non-literate with respect to such factors as academic achievement, aptitude, motivation, and values.

In recent years, increased attention has been given to the role that "functional literacy" plays in adults' ability to cope with problems in their lives. The 1973 Adult Performance Level Survey revealed widespread inadequacies among adults with regard to their ability to cope with routine problem solving activities. Although such research does not explain why some adults fail to function effectively in problematic situations, the results strongly suggest that the ability to read and use written communications plays a crucial role in functional literacy.

Whether the lack of ability to read influences how adults approach problems in general is an open question. However, it has been suggested that children who differ in reading ability also differ in their approach to solving problems (Kavale and Schreiner, 1979). The literature of cognitive psychology supports the assumption that the problem solver's understanding of a problem domain plays an important role in the way he/she solves a particular problem in that domain (Reif, 1980). Insofar as the ability to read has a bearing on the access to and/or ability to use written information, the ability to read may be a factor in the approach adults take to resolve problems that involve their use of written communications. The influence literacy has on how an adult approaches a problem and the nature of the reasoning strategies employed yield important implications for educators who are familiar with reasoning patterns of literate adults, but are also interested in knowing more about the reasoning patterns of non-literate adults.

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[1] 15 Henson Hall, University of Tennessee, Knoxville 37996.

[2] Non-literate adults are persons who read on or below a fourth-grade level.

The focus of this research was to compare problem solving/learning approaches undertaken by literate vs. non-literate adults and to develop a new methodology for analyzing first-person accounts of adult problem solving/learning experiences.

Background

The past few years have seen a rather remarkable increase in the number of investigators interested in reasoning and problem solving processes, and in the number of contexts in which these processes have been studied. Beginning with some early studies of reasoning in Chess masters and studies of problem solving in relatively circumscribed artificial problems, the door has opened to research in reasoning and decision making process in such diverse areas as medical diagnosis, solution of complex problems in physics and mathematics, psychiatric diagnosis, stock market prognostication, and legal problem solving.

In examining the research in reasoning and problem solving, two trends are clear, and may be causative factors behind the growth in interest in this area. The first of these trends is the increasing realization that much of what people do is determined by the peculiarities and particularities of the situations or contexts in which they find themselves. Some investigators have suggested that this is the reason that psychologists (and social scientists in general) have been generally limited in their ability to provide theories and findings obtained from laboratory research which generalize to the "real world." Several commentators have observed that the practical implication is to demand that research in human thought and action be studied in situations that either <u>are</u> the real world that we wish to generalize to (i.e., naturalistic research), or are at least representative in the essential elements of the real world that we wish to understand.

The second trend is reflected in the notion that what is important in understanding the way in which people think and learn is not the processes <u>by which</u> the cognitive machine operates, but the content <u>on which</u> it operates. To put it another way, the way in which we think and perceive the world around us is based upon what we know, and this knowledge is what governs what we do.

Based upon the perceived importance of content of knowledge in reasoning (as opposed to process), most recent research has focused on the knowledge aspect of reasoning; both with respect to what is known and how this knowledge is translated into action. What, for example, does an expert diagnostician in the area of pediatric cardiology "know" that a novice physician does not, and how does the expert utilize this knowledge in the context of a specific case? The key question, given this interest in knowledge, is a methodological one: How do we get at the knowledge that an individual possesses? Fortunately, it is possible to formulate a methodology that, in several guises, has been and is being used by a large number of investigators in a wide variety of settings.

Methodology

Methodology has a natural relationship to the trends described above and can be illustrated by our research on the relationship between learning and problem-solving in adults. This research is illustrative, but not definitive, of

the approaches that can be taken in this area. Our method has its roots in ethnomethodology, in research on cognitive styles, and in recent investigations of adult learning projects. The analysis is a form of content analysis of protocol data, based on verbal reports of adults accounting for their own problem solving/learning activities.

Two groups of adults were selected for participation in the study. The first group consisted of 15 literate adults with a minimum of a twelfth-grade education. The second group consisted of 15 non-literate adults. The researchers utilized a semi-structured probing interview technique whereby the principal objective of the interviewer was to obtain such information as: 1) the problem definition; 2) the steps taken by the interviewee to resolve the problem; and 3) the reasons supporting the steps taken. Three interviews with each person were conducted over a period of three months. The first interview involved the identification and discussion of a problem that had recently been experienced by the interviewee, soliciting the above three broad categories of information. The second interview involved the presentation to the interviewee of two types of hypothetical problem situations. Each interviewee was asked to "think aloud" as he/she approached the hypothetical scenario. The purpose of this second encounter with the interviewee was to gather data which could be contrasted to "real problem" data, and in the interest of determining the relative utility of the two forms of data collection. The third interview involved a check on the progress toward problem solution made by the interviewee since the first interview, the collection of any data found missing in the results of the first interview, and the justification of findings regarding rule structure resulting from analysis of the first and second interviews. The intention of the three interviews, taken together, was to provide as complete an account as possible regarding each interviewee's problem solving approach and reasoning pattern. Each interview was recorded on audio tape and transcribed verbatim in the form of typed transcripts. The resulting transcripts (protocols) then served as a data base for subsequent analysis.

Analysis

The data analysis consisted of two parts. The first was a method of protocol analysis which we refer to as a "reduction". A reduction is a textual analysis which takes the form of a search for thematic structures. These structures are the underlying meanings that are uncovered through a systematic manipulation of the basic analytical units of the text (intended meanings). The reduction moves through several steps of analysis, beginning with the original transcript and ending with a succinct and integrated description of the subject's problem solving process and rationale. The reduction is accomplished in five stages. In the first stage, the transcript is segmented into intended ideas, or "atoms." The atoms (sentence paraphrases) are listed individually and numbered. In the second stage, each atom is placed into one of six categories of propositional attitudes (e.g., beliefs, norm, intention), which form the data base from which we develop the third and fourth stages of the reduction. In the third stage, we examine each category of logical connections among atoms. The underlying commonalities produce themes, or generalizations over sets of atoms. The fourth stage is a preliminary representation of steps taken by the problem solver to resolve his/her problem. The major elements of the flow-chart representations are derived from the category of intentions. The fifth

stage involves a "logical analysis" which results in a depiction of the interdependencies of the person's premises and conclusions. These non-linear relationships are then attached to the schematic elements to help "explain" the basis of the person's approach to problem solving. When this analysis is complete, the result is a model of the person as a problem solver, consisting of his/her problem solving process and a structured record of his/her accounting practices or rule system. The second part of the analysis involved the collection and compilation or ratings, on a variety of psychological dimensions for each transcript.

Results and Discussion

The first analysis revealed different patterns of problem solving among literate vs. non-literate adults. Literate adults were more likely to follow pre-planned, step-by-step approaches to solving problems, guided by somewhat carefully selected rules from more well-defined rule structures. Non-literates were more stimulus-bound, concerned with the immediate environment, and followed fewer but more global rules in their attempts to resolve problems. Literate adults were more likely to look at possible solutions to problems in terms of their advantages and disadvantages and based on that information, select the most appropriate solution. Non-literates were more likely to consider solutions at a more superficial level and make their decision without considering possible ramifications. Literate adults were more likely to consider the long-range effects of their choice of a solution while non-literates exhibited a tendency to base their decision on short-term considerations. The second analysis, coupled with the first, revealed a rather stable set of factors which, at a gross level, differentiate among literate vs. non-literate populations; and at a more molecular level, differentiate among problem solvers within each population. At a general level, the literate population exibited: 1) a higher level of perceived efficacy or control over the problem and their environment in general; 2) less egocentricism or faulty logic; 3) greater evidence of long-term, detailed planning in their problem solving process; 4) greater evidence of metaknowledge (about their problem solving process); and 5) a greater degree of flexibility in considering alternate routes to problem solution.

The methodology is also treated as a finding, insofar as it provides an important new means of accessing the knowledge base of individual problem solvers. The final results of both parts of the analysis are presently being examined for purposes of generating hypotheses for further research. It appears possible to computerize the reasoning process which would yield predictions about their future problem solving behavior. The rigorous method for analyzing self reports should advance the state of the art in problem solving/learning research, insofar as the problem solver's largely tacit knowledge base is considered important in determining the problem solving process of individuals. Educators may find the method useful as a tool for diagnosing individual learning needs.

An Investigation of Variables Affecting The Reading Processes of Older Adults

Chris Petersen*
American Institutes for Research

Robert Bernard and Mohamed Ally**
Concordia University

INTRODUCTION

Assume that you are an adult educator charged with the task of designing a written pamphlet for older adults which provides information on nutritional changes related to age. What would be the most appropriate and effective way to organize the content? What could you do to increase readability and comprehension? How could you promote learner involvement and interest in the material for your audience of older readers?

These are just some of the difficult decisions faced by practitioners attempting to design materials for older readers. The present research is one of a series of studies designed to find some answers by systematically investigating instructional design variables which influence the reading comprehension of older adults.

THEORETICAL FRAMEWORK

In view of a historical preoccupation with youth centered education it is not surprising, but disappointing to discover that the overwhelming majority of the studies concerned with determining which variables influence learning from textual materials have been conducted with children or college undergraduate subjects (cf. Carver, 1972; Hartley & Davies, 1976; Faw & Waller, 1976; Melton, 1978). A review of the literature did reveal, however, a limited number of studies (cf. Glynn & Muth, 1979) which have specifically investigated older adults ability to process and remember textual information. Unfortunately these investigations typically involve cross-sectional, cohort comparisons. Upon reviewing the limited evidence from these existing studies Glynn & Muth (1979, p. 259) concluded that: "in general, older adults are unable to recall meaningful verbal material as well as young adults".

While there is ample research evidence to suggest age-cohort deficits, there is a general paucity of research evidence regarding the facilitative effects of various intervening variables on the textual processing and recall capabilities of older adults. One promising line of research employed with younger subjects has been a comparison of micro processing variables related to typographical cuing systems, such as italics, underlining, color cuing, organizational headings, marginal notes and/or questions (cf. Annis & Davis, 1978; Fowler & Baker, 1974; Hershberger, 1974). Few, if any studies have employed similar paradigms with older adults. Therefore, in response to Glynn & Muth's (1979, p. 265) pleas "to validate empirically the relative

* 1641 Sumner, Suite 3, Lincoln, Nebraska 68502
** Rm. 549, Dept. of Education, Concordia University
1455 De Maisonneuve, Montreal, Quebec H3G1M8

effectiveness of typographical cuing strategies with a population of elderly readers", this investigation specifically tested the effects of organizational headings, underlining, and marginal notes on the processing and retention of textual information by older adults.

One of the theoretical approaches which has also been receiving considerable attention and has been strongly advocated by educational gerontologists (Glynn & Muth, 1979) is the levels-of-processing approach (Craik & Lockhart, 1972). This approach is actually a model of memory which can be used to describe, explain and predict the various activities needed to process, recognize and recall textual material. The theoretical orientation of elaboration has its roots in the early work of Bartlett (1932) who argued that memory of textual information is not reproductive, but a constructive process. Reviews of research, particularly that of Reder (1980), reveal that stimulating elaboration and construction during textual processing can significantly affect both processing and retention. Although no specific studies of elaboration with adults are included in Glynn & Muth's (1979) review, they argue that "older adults should be encouraged to integrate text information with knowledge they already possess and thereby generate extra-textual extensions of meaning" (p. 267).

In an effort to empirically investigate the theoretical arguments and practical implication regarding elaboration, the present study was designed to include an independent variable directly related to learner involvement. Specifically, the study was designed to include three levels of learner involvement related to the dimension of elaboration. The first level labelled "passive" consisted of the presentation of the typographical cuing variables with no other stimulus for learner involvement. The second level, labelled "elaboration", consisted of the presentation of the typographical aids with specific questions/cues for which the reader was asked to elaborate by citing an example from personal experience. The third level, labelled "construction" represents a condition where readers were not presented with typographical cues, but instead given instruction to construct them for themselves (e.g. instead of being given marginal notes, the reader would be asked to make notes on the text).

METHOD

Subjects and Design. The investigators recruited 115 volunteers from the Golden Age Association (a Jewish organization serving members 55 years and up) in Montreal to participate in the study. Eighteen of the participants were excluded from the research sample because they could not read or write English. The remaining 53 female and 44 male subjects ($\bar{X}$ age = 69 years) were randomly assigned to a post-test only, 4 x 3 factorial design with first factor consisting of the four levels of typographical cues (headings, underlining, marginal notes, control conditions) and the second factor consisting of the three learner involvement conditions (passive, elaboration, construction).

Materials and Procedures. In order to insure content relevence and appropriateness, the investigators developed a passage which dealt with some nutritional changes associated with aging. In order to insure that all subjects could read the entire passage under controlled conditions, the passage was kept short (671 words) and was designed to be at the 7th or 8th grade reading level according to the Fry and Dale/Chall readability formulas.

Different forms of the passage were prepared for each experimental condition. For the typographical cues factor four forms of the passage were prepared: one with paragraphs organized around headings, a second with main ideas typed in the left margin as notes, and third with main ideas (topic sentences) underlined, and a fourth (control) with the content typed in normal blocked paragraphs. For the learner involvement factor three types of instructions were prepared to accompany the passage: one type requesting the learner to simply read the passage (passive), a second type instructing the learner to write down a personal example of the concept or main idea (elaboration), and a third type instructing the learner to identify main ideas (construction). These various combinations of forms of the passage were randomly assigned to subjects in sealed packages.

In order to minimize potential adverse effects elicited by "experimental procedures", the atmosphere was kept informal and non-threatening as possible. Subjects were greeted at the door and given refreshments. The experiment was conducted with small groups (n=15) seated around conference tables in a seminar room. Participants were given a package containing: a standardized vocabulary test (Nelson-Denney), the reading passage with the experimental condition, a multiple choice, recognition test on passage content, and a free-recall task. While attempting to be flexible and informal, the experimenters gave standardized directions and controlled the time for reading of the passage and completing the recognition and recall tasks.

RESULTS

Due to the increased heterogeniety of the population with age, the potential for intervening variables which may confound the results also increases. Rather than attempt to account for these age-associated confounds through cross-sectional design with arbitrary groups and artificial age cohorts, multivariate, multiple regression analyses were employed to determine the potential value of age, number of years of previous education, and the Nelson-Denney Vocabulary Subtest as statistical controls for use in multivariate analysis of covariance procedures. The Nelson-Denney Vocabulary Subtest was a significant predicator for all of the recognition and recall measures accounting for 25 to 40% of the variance in subject scores (with homogenity of regression across experimental groups).

The two dependent measures of content recognition consisted of the 8 knowledge and 8 comprehension items on the multiple choice test. The task requiring subjects to recall the passage in their own words was scored for both the total number of words recalled and for the number of idea units recalled. Only 78 of the 97 subjects completed all the experimental tasks such that they had these four dependent scores and the covariate which are necessary for multivariate analysis of covariance hypothesis testing. Multivariate analyses of these dependent measures for the 78 subjects revealed no significant interaction ($\underline{Fm}$ (24,217) = 1.14, $\underline{p} < 0.30$), but significant main effects for the typographical cue factor ($\underline{Fm}$ = (12,164) = 2.61, $\underline{p} < 0.02$), and for the learner involvement factor ($\underline{Fm}$ (8,124) = 3.63, $\underline{p} < 0.01$). While space does not permit a detailed account of all scores by separate condition, the general trend for the typographical cue conditions was that the groups receiving headlines and underlining tended to score higher than the groups receiving marginal notes or control conditions. For the learner involvement

factor, the groups receiving the elaboration and construction instructions consistently scored lower than the passive group, with the elaboration group typically scoring the lowest.

DISCUSSION

If there is any consternation regarding the general lack of research regarding the factors influencing the reading processes of older adults, one only needs to attempt to carry out such a study. Not only is it difficult to recruit older adults who are willing and capable of giving over one hour of their time for intense and demanding tasks, it is extremely difficult to maintain the rigor necessary for experimental validity. Furthermore, there is a constant balancing act between the control necessary for internal validity and the artificiality of the experimental environment which jeopardizes external generalization. Yet, these limitations and methodological difficulties do not diminish the need to find some empirical answers for important practical questions of how to best design written materials of all types for older adults.

This experiment represents but a small step toward attempting to find out how to best design written materials for older adults which would be delivered at a distance or in situations with little opportunity for learner interaction. An obvious limitation is relatively small sample size which may have limited statistical power such that a significant interaction was not detected. Of immediate practical significance, however, was the finding that various types of typographical cues do significantly differ in their effectiveness, such that headlines and underlining seem to be better than marginal notes or nothing. Another surprising finding, which is an apparent contradiction to theoretical predictions, was that subjects in the control condition (no cues for learner involvement) scored significantly higher than those which received learner cues to construct information and those cued to elaborate on ideas from personal experience. It maybe that experimental time constraints did not allow older learners sufficient time to use these cues to more effectively process and retain information. These questions and the myriad of others that remain can only be answered by continued experimentation and naturalistic inquiry.

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THE DEVELOPMENT OF A MODEL TO BE UTILIZED IN THE EVALUATION OF THE TELEPHONE AS A VEHICLE FOR NUTRITION INFORMATION

Jean C. Robbins, Ph.D., R.D.
and
Rebecca M. Mullis, Ph.D., R.D.
Virginia Polytechnic Institute and State University*

INTRODUCTION - CONCEPTUAL FRAMEWORK AND STATEMENT OF PURPOSE

As consumers have encountered the accumulation of knowledge about nutrition, many have realized that the information is often presented in a form that is too technical to apply, too difficult to understand, or too time-consuming to investigate. Thus in order to assist consumers with their nutrition related concerns information must be easily accessible and presented in an appropriate manner. The telephone communication system offers a vehicle for nutrition education that meets these criteria. The system is accessible and offers information close to the teachable moment--the time the consumer is interested in securing the information.

The telephone has been used in various nutrition education projects (Wagner, et al., 1960, 1966, 1965, et al., Wakefield and Vaden, 1973, Hinkle and Fessler, 1975, Spears, Moore and Tuthill, 1973) in many cities. However, there has been little in-depth research into the effectiveness of nutrition education using the telephone communication delivery system.

This study focused on the development of a model to evaluate the influence of selected factors on the performance of a telephone delivery system for nutrition education. The model was utilized to evaluate the performance of a telephone delivery system, Dial-A-Dietitian, in Roanoke Valley.

In order to describe the Dial-A-Dietitian Model (Figure 1), it is first necessary to define the goals of the system and then to describe the articulation of the parts of the system. Initially, the goals of the Roanoke Dietetic Association Dial-A-Dietitian Program were adapted from guidelines of the American Dietetic Association Dial-A-Dietitian Advisory Committee. The goals of the research study were stated as follows:

1. To design a model to evaluate the influence of selected factors on the performance of a telephone delivery system for nutrition information.
2. To use the model to evaluate the performance of the Roanoke Dietetic Association Dial-A-Dietitian program.

An examination of the literature relating to telephone delivery systems for nutrition education revealed a need to develop an evaluation model for testing the effectiveness of such systems. The evaluation approach used in this model was compiled from the evaluation ideas and models of several contemporary writers without following exclusively the theories of any particular individual. However, this model is similar to a framework developed by Glanz (1979) for a study of dietitians' effectiveness and patient compliance with dietary regimens.

Kramer and Smit (1977) stated that a systems approach or systems thinking

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*Virginia Cooperative Extension Service, 2728 Colonial Avenue, S.W., Suite #10, Roanoke, Virginia 24015-9989

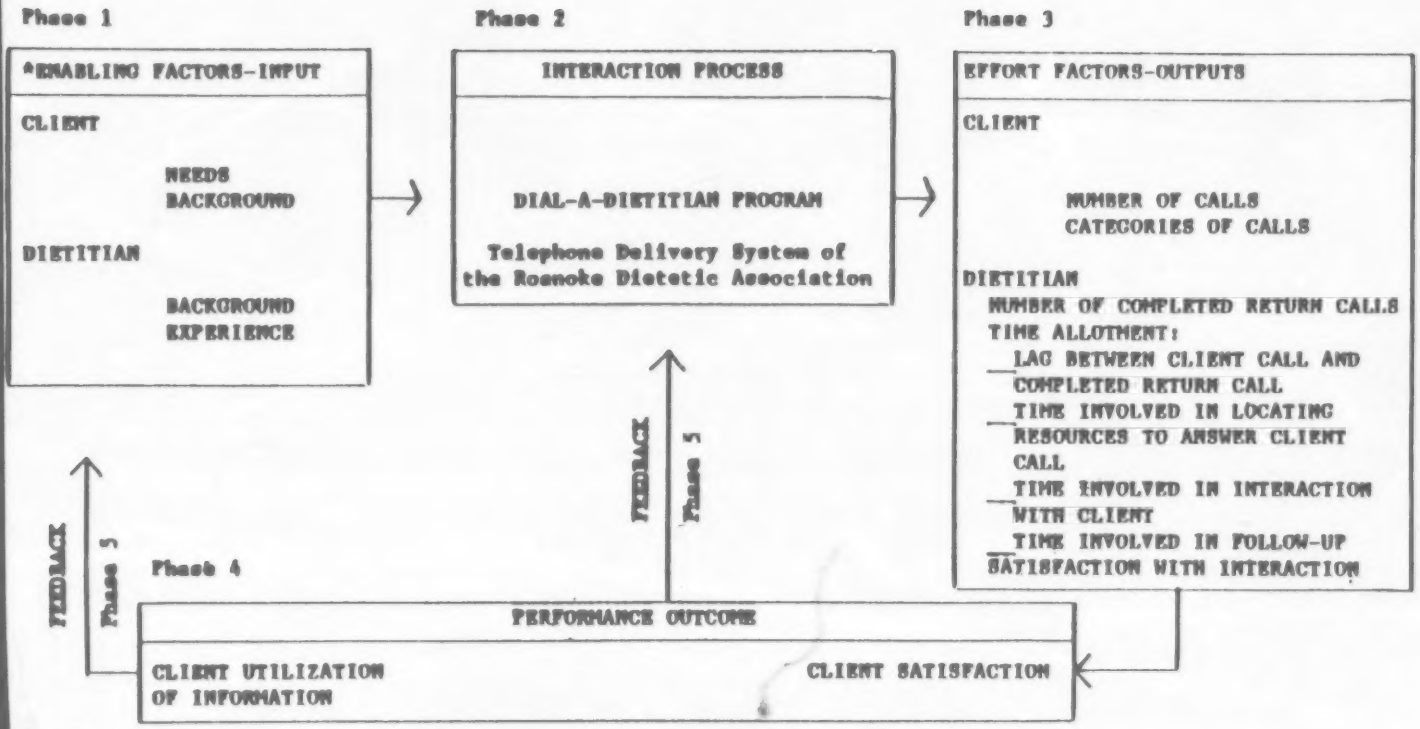

Figure 1. Dial-A-Dietitian Model to Evaluate the Telephone Delivery System Dial-A-Dietitian Program of the Roanoke Dietetic Association

*Asterisk indicates other Enabling Factors not measured in this study, e.g. organizational structure with operation committees of the sponsoring organization; funding source; publicity; material resources; community linkage; staffing.

is a means of tackling problems, a methodology. Churchman (1968) defined a system as a set of parts coordinated to accomplish a set of goals. The model employed in this research is characteristic of a systematic and organized framework. It is sequential in nature with each phase contributing to the total operation of the systems model.

The model is based upon the classification of concepts using Bloom's Taxonomy of Educational Objectives (1974) to order these concepts into the nutrition information delivery system. See Table 1. The achievement of these concepts was measured in Phase 1 - Performance - by evaluating client response to a telephone survey.

THE MODEL DESIGN

The component phases of this Model are (1) Enabling Factors, (2) Interaction Process (3) Effort Factors, (4) Performance, and (5) Feedback. These can be translated into a systems framework by viewing the Enabling Factors as inputs, the Interaction Process as the system of program activity, and the Efforts as outputs. Performance or outcome provides an avenue for feedback which becomes the basis for the evaluation study.

Each phase of the Model will be discussed. Some of the related factors which were not included in the study were organizational operation, funding, publicity, community linkage, and material resources.

Enabling Factors - Phase 1 (Inputs)

The Enabling Factors (Figure 1) were important to the initiation of the Dial-A-Dietitian program. Knowles (1970) stated that "the starting point is always the adults' interest." Prior to the operation of Dial-A-Dietitian, a survey of community agencies revealed a perceived need for this type program. Other significant findings from this survey having relevance to the planning of the program were (1) There was no specific channel for referral of nutrition information among Roanoke agencies. (2) There had been no evaluation of telephone information in nutrition education in the Roanoke Valley. (3) Three agencies were receiving questions on diet modifications although none of these agencies had medical sanction to respond to questions of this type.

Client needs varied as to kinds of information requested. Use is posited to be dependent on the client's demographic profile and attitudes about nutrition, and his need for nutrition information.

The dietitian participated as a resource person in the operation of the system. It should be noted that the varying backgrounds and experiences of the dietitians can be important determinants to any system.

Interaction Process - Phase 2

The Interaction Process is the actual system activity for the client who contacted the Dial-A-Dietitian program - the telephone delivery system. The Interaction Process serves as the communication link between the client and the nutrition professional, the Registered Dietitian.

Effort Factors - Phase 3 (Outputs)

Suchman (1967) described effort as "the quantity and quality of activity that takes place." Effort Factors for this study included the number of client calls, category of calls, the number of completed return calls by the Registered Dietitian, the time lag between the client call and the completed return

TABLE 1. Dial-A-Dietitian Program Concepts and Categories

(1)	Client can recall the nutrition information from Dial-A-Dietitian	Knowledge (Cognitive Domain)
(2)	The client will use the nutrition information from Dial-A-Dietitian	Application (Cognitive Domain)
(3)	The client is satisfied with the telephone delivery system as a nutrition information resource	Responding - Satisfaction in response (Affective Domain)

call, the time involved in the dietitian's location of resources to respond to the client call, the time involved in actual telephone interaction with the client, time involved in follow-up, and Dietitian satisfaction.

Performance - Phase 4 (Outcome)

Performance is the result of effort and was assessed in terms of specific outcomes. For this study, Performance was measured by client satisfaction and client utilization of information. These outcomes functioned as dependent variables in the study. Performance information was used as Feedback - Phase 5 for the decision-making process to effect program change.

The composite Dial-A-Dietitian Model is presented in Figure 1. The interrelationships between the Phases is represented by the directional flow of the arrows extending to the Feedback Phase.

METHODOLOGY

Subjects

The term client describes the population who actually used the Roanoke Dietetic Association Dial-A-Dietitian program between January 1, 1981 and July 1, 1981. A random sample (N = 152) was selected from the total client pool (N = 264). This selection was based on a method of Slonin (Vermeersch, 1979). At the time of contact with the system, each client in the pool was assigned a number corresponding to the number on their Encounter Form. A table of random numbers was used to obtain the sample for the study.

Treatments

The treatment or interaction process (Phase 2) began when the client initiated contact with the Dial-A-Dietitian program. The Telephone Answering Service Operator answered the Dial-A-Dietitian telephone number and recorded the client's name, telephone number, date, time of call, and the client's question on the Encounter Form. In addition, the preferred time for the return call was recorded. The Registered Dietitian on the Dial-A-Dietitian volunteer schedule received the Encounter Forms on a daily basis from the Answering Service Office or from the Co-Chairman of the Dial-A-Dietitian Committee.

The Registered Dietitian on duty attempted to return the client call within forty-eight hours. After the return call, the Registered Dietitian completed the Encounter Form. Various Dial-A-Dietitian Committee members assisted the volunteer dietitian in completing the client request, e.g. mailing of follow-up material to the client.

Instrumentation

Effort Factors (Phase 3) or outputs were measured by (1) number of client calls, (2) categories of calls, (3) number of completed return calls by the Registered Dietitians, (4) the time lag between the client call and the completed return call, (5) the time involved in the location of resources to respond to the client call, (6) time involved in actual telephone interaction

with the client, (7) time involved in follow-up, and (8) Dietitian Satisfaction. Data related to Effort Factors (Phase 3) or outputs were compiled on the Encounter Form.

Performance (Phase 4) or outcome was measured by client utilization of the information from the Interaction process and client satisfaction. The Telephone Survey was used for the client evaluation instrument with three sections for the client reaction: Section I consisted of questions for reaction to the process. Section II was an attitude assessment, which was designed to measure both the direction and intensity of a person's attitude toward the interaction process. A Likert-type format was used for attitude items. Section III consisted of a form to collect demographic profile information.

The content validity for all instruments was established by soliciting twelve Richmond, Virginia, Registered Dietitians to judge. Prior to field testing, the instruments were evaluated at various stages of their development by six faculty members at Virginia Polytechnic Institute and State University, Blacksburg, Virginia. These examinations focused attention primarily on the content, clarity, and appropriateness of the items which were included in the final form of the instruments. Instruments were field tested with a group of twelve clients in an established Dial-A-Dietitian program in Knoxville, Tennessee. To establish reliability for the Telephone Survey of Clients, Cronbach's alpha was computed for the client questions and yielded a reliability coefficient of 0.86.

The Registered Dietitian completed a questionnaire and an attitude assessment section as a part of the Encounter Form. The Cronbach's alpha was computed to establish reliability of the questions on the Encounter Form; the reliability coefficient was 0.83. The volunteer Dietitian also completed a Demographic Profile. These instruments were judged as above by the twelve Richmond Dietitians, professional judges from the faculty, and the Chairman of the Dial-A-Dietitian program in Knoxville, Tennessee.

Statistical Analysis

The descriptive variables, e.g., number of client calls, number of completed return calls, the time lag between the client call and the completed call, the time involved in the Registered Dietitian location of follow-up material, time involved in actual telephone interaction with the client, time involved in follow-up, and characteristics of clients, were computed as frequency distributions. See Table 2.

Individual Chi Square Tests of Independence were used to determine the relationship between the independent variables, Enabling Factors (Phase 1) and Effort Factors (Phase 3), and the dependent variable, Performance (Phase 4). The data were recorded upon IBM cards, verified, and processed at the Virginia Polytechnic Institute and State University Computer Center, Blacksburg, Virginia. The Statistical Package for the Social Sciences (Nie et al, 1975) was employed in the computer analysis of the data.

Table 2. Summary of Analysis of Data from Demographic Profiles of Clients

Categories	Absolute Frequency	Relative Frequency (Pct.)
Sex:		
Male	13	8.6
Female	139	91.4
Age:		
Under 25 Years	6	3.9
26-35 Years	33	21.7
36-45 Years	25	16.4
46-55 Years	24	15.8
56-65 Years	35	23.0
Over 65 Years	29	19.1
Employment Status:		
Employed, full time	36	23.7
Employed, part time	10	6.6
Unemployed	2	1.3
Retired	39	25.7
Homemaker	65	42.8
Occupation:		
Professional	30	19.7
Office/Clerical	14	9.2
Teaching	1	0.7
Factory	3	2.0
Self Employed	4	2.6
Homemaker	65	42.8
Retired	34	22.4
Student	1	0.7
Level of Education:		
Grade School	9	5.9
High School	54	35.5
College	77	50.7
Graduate School	12	7.9

N = 152

Results

The components for data collection and measurement were Phases 1, 3, and 4 of the Dial-A-Dietitian Model (Figure 1). The input data (Enabling Factors, Phase 1) from this study described the composite of the 152 clients for Dial-A-Dietitian as a female, over 46 years of age, and a homemaker with a college level of education. See Table 2.

Other data indicated that the client was satisfied with the Dial-A-Dietitian program (outcome), and that the Registered Dietitian had provided the information which the client had requested. The data also demonstrated that the client used the information (outcome) and that the information was perceived to be useful for the future. These measurements were important as an indication of cognitive domain learning.

Attitude assessment of the client demonstrated the client's reaction to the interaction with the Registered Dietitian. The data indicated that the client judged the Dietitian as being able to answer the question. The client also stated that printed material was important to the understanding of his problem, and that the Dietitian could understand the client problem and had allowed adequate interaction time.

Frequency distributions were computed of the demographic characteristics of the volunteer Registered Dietitians. Most of the Dietitians were employed full-time in hospital therapeutics and had an educational background of a Bachelor of Science degree with a Dietetic Internship. The Dietitians indicated that the orientation to the Dial-A-Dietitian program and the information resource kit had provided adequate assistance for responding to client requests for information.

The Dietitians classified the majority of client questions as information type questions. The Dietitian answered the most of the questions in the following time allotments: less than 15 minutes for finding answers; less than 15 minutes for interacting with the client; and less than 15 minutes for any follow-up information. The entire process for a client took less than one hour of the Dietitian's time.

When the frequency distributions were tabulated for the client's information level, the Registered Dietitian had rated subjectively the majority of the clients as "informed" or "well informed". The Dietitian indicated in the attitude assessment statements that the time spent with the client was adequate, that the interaction was satisfactory, and that the client seemed to understand the information. The majority of the calls were subject area categorized as either modified diets or nutrient analysis.

Individual Chi Square Tests of Independence were used to determine the relationship between the independent variables, Enabling Factors (Phase 1) and Effort Factors (Phase 3), and the dependent variable Performance (Phase 4). Strong relationships existed between the client's perception of the usefulness of the program and his satisfaction, his feeling that he had received the information he had requested, and his continued usage. Other variables did not show a strong relationship, e.g. the lag time which existed between the time of the client's call and the time of the return call of the Dietitian.

Conclusions

The Model was used to evaluate performance, which included client satisfaction and client utilization of the information from the Dial-A-Dietitian system. The results of this study support the effectiveness of the Dial-A-Dietitian project. In addition, the necessary data were generated for the formation of descriptive composites of both the clients and the Registered Dietitians, who volunteered.

This study illustrated significant association when the dependent variable, Performance or the client's perception of use of the information, was paired individually with the independent variables, whether the client received the requested information and whether the client would continue to use the information. When the dependent variable, Performance, was paired with the independent variables, whether the client would recommend the Dial-A-Dietitian program and whether the client would use the service again, there was a moderate relationship. Frequency distribution data provided data for decision-making for Dial-A-Dietitian. The descriptive composite of the client was a female, over 46 years of age, and a homemaker with a college level education. This information would determine subject matter for follow-up materials. The number of clients using the program played a role in the decision to continue funding the program.

The involuntary outcome which were not measured by this study but the information was reported to the researcher as follows:

1) The community became more aware of the Registered Dietitian as a source of nutrition information.
2) The necessity to research client questions created an opportunity for continuing education for the Registered Dietitian.
3) The Dial-A-Dietitian program developed a closer cooperation among the members of the Roanoke Dietetic Association.
4) The Registered Dietitian became aware of specific agency resources.
5) The Registered Dietitian became aware of the lay public specific needs for nutrition information.
6) The Registered Dietitians became aware that a number of clients needed in-depth counseling.

The Feedback Phase was represented in reports which were given to the Roanoke Dietetic Association members and the funding company.

Further research is needed to improve the instruments for collecting data and to provide a system of cross validation. Follow-up study is also needed to examine behavioral changes over time and to study supportive and inhibiting features of a personal context as they affect program outcomes. As outcome indicators are explored, information can be provided for the desired outcome of all nutrition information delivery systems, the achievement of optimal nutritional status for the population.

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A CONCEPTUAL ANALYSIS OF THE NOTION OF NEED IN ADULT EDUCATION [1]

Marie Rolland-Barker [2]
Université de Montréal

PURPOSE

The needs assessment of adult learners is recognized in adult educational discourse as an important initial procedure to programme planning. However, in recent years, efforts have been undertaken to evaluate this educational practice and to look into the issues it generates. Amongst these issues, are the problems raised by the question as to who determines needs.

In the sphere of adult education, programme planners and educators appear reluctant to impose upon adults their own educational and curricula values. On the other hand, they also express their doubts as to the adult's capacity in perceiving and articulating judiciously what are labelled as his/her "real" needs. In other words, there exists a paradox which could be described in this common lament: Who are we to prescribe to adults what we think they should know . . . and yet, we sincerely believe they are unable to do so themselves.

This study claims that views and procedures for assessing needs reflect and, at the same time, obscure the paradox described. The overall purpose of this research then, is to analyze and elucidate the notion of need in adult educational discourse. The working hypothesis of this philosophical enquiry is that the adult makes the distinction between the normative expression of his/her educational needs and the emotive expression of his/her educational interests.

METHODOLOGY

This philosophical research employs conceptual analysis to examine the meaning of the central adult educational idea of "need". The major task of conceptual analysis consists in clarifying the meanings of key concepts and propositions as they are found in adult educational discourse, and in appraising the clarity of the reasoning, the forms and logical force of the arguments produced.

A review of the literature reveals that conceptual analysis as a methodology of philosophical research is relatively scarce and recent in the area of adult education. Yet, amongst the key concepts examined in educational and adult educational discourse, the concept of need has received a particular analytic attention. These analyses, some of which are more comprehensive than others, were conducted according to distinct purposes, with the use of

1. This study was written in French as an M.A. thesis under the title: "Analyse conceptuelle de la notion de besoin en éducation des adultes".
2. Andragogie, Université de Montréal, Case postale 6203, Succursale "A", Montréal, P.Q., H3C 3T3.

a variety of analytic tools and techniques; for instance, some analyses attempted mostly to clarify the notion of need per se as it is used and understood in the field of education (Archambault, 1956, 1957; Atwood and Ellis, 1971; Griffith, 1978; Komisar, 1961; Monette, 1977; Robbins, 1981). On the other hand, other analyses proceeded to go beyond the sole linguistic or conceptual elucidation to further philosophical questioning (Champion, 1975; Lawson, 1975; Monette, 1979; Paterson, 1974, 1979; Wiltshire, 1973).

Though the validity of conceptual analysis in adult education was recently said to be " . . . . tested by the extent to which it clears up conceptual confusion and ambiguity" (Merriam, Elias & Collins, 1981), the aforementioned distinction in analyses exposes the debate as to whether analysts can or/and should advocate a neutral or value-free position in their task.

A number of techniques are available to analysts in their efforts to get clearer about a concept, whether this analytic activity leads or not to a reflective interest in further questions of explanation, justification or practical action. For this study, an analytic instrument was developed in order to circumscribe both the nature and parameters of the critical examination of the notion of need used by some adult education writers. The following five dimensions within the discourse were examined:

1. The terminology used to designate the idea of need, including the use of restrictive terms, such as qualifiers, and of auxilliary concepts, related to the key concept.

2. The meanings given to these concepts, whether they were clearly established or had to be inferred from the context. A special attention was given to semantic shifts within a discourse.

3. The relations established between concepts, the logic and justification of their association, their similarities and differences, the criteria applied to merge or distinguish assorted concepts.

4. The context of discourse; different classes of contexts were identified and taken into consideration in the analysis.

5. The definitions, analogies and examples provided either to illustrate or to clarify the meanings conveyed to concepts employed.

In addition to these dimensions, the area for the analytic investigation was delimited as follows:

1. The notion of need was primarily examined in three adult education writings:
   - Eduard C. Lindeman: The Meaning of Adult Education.
   - Paul Bergevin: A Philosophy for Adult Education.
   - Malcolm S. Knowles: The Modern Practice of Adult Education - Andragogy Versus Pedagogy.

These books were chosen as the focus of this study since they are generally accepted as being influential in the building of theory in the field of adult education in North America. Though only three books were selected because of the very nature of this conceptual analysis, other contributions were briefly examined, especially when they were deemed as explanatory, illustrative or complementary to the analysis.

2. Furthermore, the analysis of the notion of need through the selected writings was deliberately limited to cases in which "need" and/or auxiliary concepts were used:

   2.1 in attributive propositions, i.e. when affirmed by or about a specific subject.

   2.2 when this specific subject was referred to as the adult, understood here according to Piaget's (1967) two-faceted dimension, the "individual subject" and the "epistemic subject".

   2.3 when this subject "adult" was considered solely in his/her relation to education, defined here as a situation which enables the acquisition of knowledge, skills and attitudes and which is available to the adult as a means of satisfying some needs.

In other words, this analysis will examine uniquely the here called educational needs of the adult.

RESULTS AND DISCUSSION

The analytic instrument served as a guide for the systematic examination and elucidation of the concept of need within the described limits. One section of the study was devoted to each of the three major books; another section covered briefly other contributions deemed relevant.

As a result of this direct analysis, the most prevailing meanings of "need" were derived, taking into account their evolution and the semantic shifts which occurred, along with the relations established between the various concepts employed. Furthermore, it proved to be particularly enlightening to link these significations to underlying views; briefly, the analysis revealed the following:

1. a dogmatic view of need, or the concept of need-obligation, where need is defined in terms of a required and desirable state of affairs determined by a legitimate authority or a set of forces.

2. a behaviorist view of need, or the concept of need-deficiency, where need is defined in terms of a lack of and refined, mainly for operational purposes, by the added notion of gap or discrepancy.

3. a humanistic view of need, or the concept of need-interest, where need is defined in terms of the desires and preferences which are felt or perceived and expressed.

Subsequent to the direct analysis and mapping of the meanings of need in adult educational discourse, and as the study progressed, it became apparent that the problem stated at the onset of this research was not uniquely related to the conceptual and linguistic confusion surrounding the notion of need. The problematic perspective was therefore extended in order to explore specific related issues and underlying assumptions deemed as contributing directly to the paradox described earlier. More specifically the three following components were discussed:

1. The influence of the slogan: The concept of need becomes almost "consecrated" when used in slogans; consequently, such power conferred to a concept tends to inhibit analytic efforts to move beyond conceptual or linguistic elucidation.

2. The question "Who determines needs?": In addition to the ethical problems linked to this question, conceptual difficulties arise mainly by the fact the question is elliptical and thus vague, and seldom made explicit.

3. One's conception of adulthood: Predominant societal views regarding the adult make it difficult to conceive of the adult as a "complete person" in his/her relation to education, especially when spoken of by reference to his/her "needs". This section of the study suggests that the "needs language" in adult educational discourse contributes to the making of a cleavage between levels of adulthood.

Following the elaboration of the problem, this research proceeded to present a systematic reconstruction of the key concept under study. This particular task attempted to integrate as a whole the array of expressions used in adult education to designate the various dimensions, qualities, meanings and values conferred upon the generic term "need". However, this effort of integration did not seek to establish relations of identity between the various concepts since, it seemed clear, this would not be logically desirable, let alone defensible. It was nevertheless believed that a more comprehensive definition of the key concept could include, and at the same time bring some order into the plethora of terms used to signify need in adult education. This definition of need was formulated in a sequential pattern, somehow similar to Robbins' (1981) "Need Resolution Process" in his analysis of the condition of needfulness. The definition was thus made of five parts, each one presented and discussed thoroughly and separately for the sake of the analysis. These five parts are only briefly presented here:

1. A need is fundamentally a lack of
   - 1.1 per se
   - 1.2 or recognized and interpreted as a lack
     - 1.2.1 by self
     - 1.2.2 by other(s)

   This lack is either innate or natural, or it is cultural.

2. The presence of this lack engenders a condition of malaise within a specific locus (physiological, psychological, spiritual, etc.)

3. This lack manifests itself in relation to an object (taken here in its broadest sense).
   3.1 On the one hand sought for well-being purposes (physiological, psychological, spiritual, etc.)
   3.2 On the other hand, justified as being normal or legitimate by virtue of the natural or cultural characteristic of the lack, or in the name of its intensity.

4. This lack can be expressed according to one or more of the following three intensity scales:
   4.1 a scale of qualitative intensity: e.g. indispensable or required, relatively necessary, useful, pleasing, superfluous, luxurious.
   4.2 a scale of temporal intensity: e.g. now, soon, later, eventually, one day, in ten years from now.
   4.3 a scale of quantitative intensity, ranging from total absence or deprivation (0%) to quasi-satiety (99.9%).

5. Finally, this lack is reduced, satisfied or filled by an action, directed towards the object sought.

As a result of the various stages of the analysis and in the light of the elements brought into consideration as the key concept was reconstructed, the final section of this research introduced a conceptual framework which views the adult as subject of normative choices and legitimate expectations regarding education. This framework helped to lay the foundations of a conceptual and symbolic counterpart to the concept of need in adult educational discourse, that is, the concept of will.

CONCLUSION

The analytic study undertaken was meant to contribute to existing efforts to clarify the notion of need in adult educational discourse. Though only precise features of this one concept were purposely singled out, the activity has led us to highlight connected questions which arose as a result. Some of these questions are complex and fundamental, yet one cannot avoid raising them. This conceptual analysis did not pretend it could provide definite or right answers to any of them.

Other viewpoints emerging from different analyses and initial intentions could prove to be of value to the field of adult education. Likewise, other concepts, whether directly related or not to the concept of need, could gain to be clarified if only for purposes of better comprehension and communication amongst adult educationnists.

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WHAT TRIGGERS ADULTS TO ENTER COLLEGE?

Timothy J. Sewall
University of Wisconsin-Green Bay

A considerable amount of research on the adult learner has been conducted during the last decade. Studies of the characteristics, needs, goals, learning styles, interests, and barriers to participation in learning are common in the literature (Cross, 1980). This research has established several points which bear directly on the present study.

One finding of past research is that many more adults express an interest in further learning or enrollment in higher education than are actually enrolled (Carp, Peterson and Roelfs, 1974; Aslanian and Brickell, 1980). Studies of the educational goals and barriers (e.g. National Center for Education Statistics, 1972 and 1975) typically reveal the importance of career goals and situational barriers to adult students. Characteristics of the adult learner have also been studied to determine who participates in various types of learning (Cross, 1978 and 1980). Two recent studies have begun to move beyond the barriers and goals studies and have questioned adults about the catalyst or event that precipitated their enrollment (Astin, 1976; Aslanian and Brickell, 1980).

Major Objectives of the Present Study. The present study was designed to address three major issues: (1) What triggers adults to enter or reenter a bachelor's degree program? (2) Do triggering events vary with an individual's goals, specific demographic variables or other life circumstances? (3) Is there a relationship between barriers to education and triggering events?

METHOD

Participants. A sample of 1343 adult, degree seeking students from six campuses of the University of Wisconsin System were selected for participation in the study. "Adult degree seeking student" was defined as an individual 25 years of age or older as of the first day of the Fall, 1981 semester. In addition, to be included in the study, the individual had to be a matriculated, undergraduate student who had not previously been awarded a bachelors degree. The six campuses participating in the study were selected because of the large proportion of adults enrolled in their degree programs. In addition, they provided a good mixture of both small and large campuses (600 to 25,000) serving urban, suburban and rural populations.

Procedure. All data were collected through the use of a mailed questionnaire. The questionnaire was designed to gather relevant demographic information including the age, sex, marital status, occupational status and educational history of the respondent. Information regarding perceived barriers to earlier completion of a degree program, educational goals and the catalyst or event which directly triggered the respondent's return to school was also collected.

Of the original 1343 adult students surveyed, 1007 returned a completed questionnaire for an overall response rate of 75%. Ten surveys were returned as nondeliverable and 119 partially completed surveys were subsequently eliminated leaving 888 questionnaires eligible for inclusion in the study.

Timothy J. Sewall, Asst. Director, Wisconsin Assessment Center, University of Wisconsin-Green Bay, LL 805, Green Bay, WI 54302

RESULTS

Although the present study was limited to adults who were matriculated undergraduates, the respondents proved to be a highly diverse group that could not be easily fit into a demographically homogeneous profile. The proportion of individuals within a demographic category frequently varied across age, sex, employment status and other factors.

Age and Sex. Overall, 62% of the respondents to the survey were female. The sex distribution did, however, vary with age. Within the 25-29 age range the proportion of females only slightly exceeded males (53% vs. 47%). However, among students over 35, female students outnumbered male students 3 to 1. Respondents ranged in age from 25 to 69 with nearly 73% falling between the ages of 25 and 34. The average age and median age of the entire group was 32 and 30 respectively.

Marital And Family Status. Well over half (61%) of the questionnaire respondents were married, 21% were single and had never been married, 17% were divorced or separated and 1% were widowed. While approximately 61% of the males and females were married, there were nearly twice as many single men as women (29% vs. 16%). On the other hand, women were much more likely to be divorced or separated than males (22% vs. 9%).

Along with the large proportion of students who were married, an equally large number (62%) had children. Among the students surveyed, 23% had at least 1 preschool child, 45% had school age children and 10% reported having children over the age of 18. Sixty-eight percent of the female students had children compared to 54% of the men. Women also reported having children who were older than the men's. For example, while 30% of the men had preschool children, only 20% of the women had children who had not yet entered school. On the other hand, significantly more women had school-age children.

Employment Status. Given the average age and marital status of the adult student, it is not surprising that 66% of the respondents were employed at the time of the study, including 43% who were employed full time. Twenty percent of the adult students indicated that they were unemployed, with the remaining 14% listing their present employment status as full-time homemaker.

Men and women differed significantly across the four employment categories. In general, a higher proportion of men were employed outside the home (76% vs. 58%), including 60% of the men who were employed full time compared to 33% of the women. However, more women were employed part time (27% vs. 16%) and, roughly, the same proportion of men and women considered themselves unemployed at the time of the survey (23% vs. 18%). Finally, 22% of the women and less than 1% of the men considered themselves full-time homemakers.

Educational Background and Characteristics. The majority of adults who responded to the survey had attended a postsecondary institution at some time in the past. A total of 65% attended a college or university prior to their current period of enrollment. An additional 16% had completed technical school courses, bringing the total to 81% who had some prior postsecondary educational experience. Women were less likely than men to have taken courses beyond high school and also less likely to have attended college at some time in the past.

Length of time between high school graduation and the first time a respondent took a college course for credit was also calculated to get a

better sense of the educational history of the respondents. One third of the adults (32%) had attended college immediately after high school but then dropped out. Another 17% enrolled in college between one and three years after high school graduation but were unable to complete their degree. Men and women differed somewhat regarding the length of time between high school and college with 11% fewer females entering college within three years after high school and 18% more waiting 10 years or more after high school graduation to attend college.

Enrollment Status. In order to determine current educational status, respondents were asked to indicate their present class standing and the number of credits they were currently taking. Among the adults responding to the questionnaire, 62% were underclassmen, evenly divided between the freshman and sophomore classes. Twenty percent of the adult students had junior standing, with the remaining 18% at the senior level. The distribution of class standing by sex revealed that among the female respondents, a full one-third (34%) were freshmen compared to only 25% of the men. At the senior level there was a 12 percentage difference between males and females, with 26% of the men and 14% of the women reporting senior standing at the time of the survey.

An analysis of the number of credits being taken during the Fall, 1981 semester, revealed that 65% of the respondents were attending school part time (11 semester credits or less). Nearly 30% of the group were taking between one and five credits compared to the 35% who were attending school full time. There were no differences between men and women in the number of credits carried. There was a moderate relationship between age and number of credits taken: students over age 40 tended to take fewer credits. For example, 75% of the respondents aged 40-44 years attended school part time and 84% of the adults 45 and over attend school part time.

Finally, there was a strong relationship between present employment status and number of credits carried. Among those adults who were employed full time, only 7% were also attending school full time. Among those learners who considered themselves unemployed, 69% were attending school full time. Fifty-six percent of the part-time workers attended school full time while 39% of the full-time homemakers were taking 12 or more credits.

Barriers to Previous Enrollment. In addition to the demographic and educational questions, adult students were asked to indicate whether each of nine possible barriers was "very much," "a little" or "not at all" responsible for delaying their college enrollment. A separate item asked for "the single most important" reason for not enrolling or completing their degree earlier. Respondents were also encouraged to specify "other" factors which may have prevented them from returning to school and rank these according to the above criteria.

Only one barrier, "wanted to or had to work" was rated "very much" responsible for delaying the enrollment of more than 50% of the matriculated adult students. Two additional factors, including "family responsibilities" and "lack of funds" were considered very important barriers by at least 25% of the respondents. All three barriers can be considered situational barriers defined by Cross (1980, p. 106) as "arising from one's situation in life at a given time." Dispositional or attitudinal barriers, including lack of interest and lack of encouragement, also prevented some adults from enrolling in college earlier.

When forced to choose the single most important barrier, more respondents chose family responsibilities than any other barrier. Unfortunately, with

only 27% of the respondents selecting this barrier, no single factor emerged as "the" reason for delaying college entry. However, when taken together, the barriers of cost, family responsibilities and work responsibilities account for over half (57%) of the most important barriers. These results strongly suggest that most adults delayed their college enrollment for situational reasons rather than for reasons related to attitudes about college or other dispositional factors. Only a small number of adult students cited institutionally related factors such as course schedules, locations, lack of information, etc., as important barriers.

Reasons for Returning to School. Survey respondents were also asked to indicate their reasons for pursuing a degree at the present time. Students were asked to rate the importance of the seven goals listed and were also asked to indicate their most important goal. Most respondents felt that a very important reason for enrolling in a college degree program was "to develop a new career" (65%), "simply to learn" (60%) and "to have the satisfaction of having a degree" (50%). Forty-seven percent indicated that a very important goal was "to achieve independence and a sense of identity" while one third (33%) indicated that "career advancement" strongly influenced their decision to continue their postsecondary education.

When forced to choose the single most important reason for continuing their education, a little more than half (52%) selected career oriented objectives. Another 40% chose personal growth goals as their primary goal, including simply to learn, achieving independence and a sense of identity and satisfaction of having a degree. Less than 1% of the respondents indicated that their major reason for return was socially oriented (getting away from routine, to make contact with people).

Triggers to Participation in Degree Programs. The last two survey questions asked the respondents to indicate what events precipitated their decision to return to school at the present time. Approximately one third of the respondents felt that job dissatisfaction (34%), encouragement from family, friends, etc. (31%) or the availability of funds (28%) were major triggers in their decision to enroll in college. These same triggers were also ranked most important by the highest proportion of respondents (27%, 12% and 11%, respectively).

The triggers fell into five general categories: 37% of the respondents cited job or career related factors, 26% cited factors related to one's family, 11% were triggered by the availability of funds, 10% obtained some specific information and then enrolled and 7% expressed the idea that they returned for personal, intrinsically motivated reasons. Events related to changes in the family (e.g. children entering school, divorce or other family problems, getting encouragement, etc.) were more likely to precipitate a woman's return to school, whereas men were more likely to be triggered by job-related events. It is interesting to note, however, that job dissatisfaction and the loss of a job triggered only slightly more men than women.

Triggering Events and Goals. As indicated earlier, approximately half (52%) of all the respondents to the survey indicated that they had returned to school for career related reasons. There does appear to be a slight tendency for people who have career related goals to cite career related events as triggers. For example, 67% of the people who were dissatisfied with their jobs wanted to develop a new career or advance in their present one and 60% of the respondents who came back to school after losing their jobs were also interested in developing new careers. On the other hand, only 34% of the

respondents who decided to enroll in college after their children entered school indicated that the primary goal was career development or advancement.

Relationship Between Barriers and Triggers. As indicated earlier, no single barrier emerged as "the" reason for not enrolling earlier and no single triggering event was selected by a majority as precipitating their decision to enroll. However, a close examination of the data does suggest a moderate to strong relationship between the types of reasons cited as barriers and the event which subsequently triggered their decision to enroll in college.

This relationship can be exemplified by the fact that a large proportion of adults who indicate that family responsibilities were a barrier to enrolling in college earlier cite family related events including children entering school (78%), family or marital problems (49%) or encouragement from family, friends, etc. (30%) as triggering their decision to enroll. Forty-seven percent of the individuals who indicated that the need to work delayed their enrollment cited either job dissatisfaction or encouragement as the primary reason for returning to school. Almost two-thirds of the respondents who felt that lack of funds was the major barrier selected either the availability of funds (34%) or job dissatisfaction (22%) as the primary triggering event. Additional, more direct examples of a relationship between barriers and triggers can also include the fact that 85% of the respondents who cited military service as the most important barrier indicated that discharge from the military triggered their enrollment. Finally, a majority (55%) of individuals who felt that lack of information was primarily responsible for their delay rated obtaining information or receiving encouragement as the major reason for returning to school.

SUMMARY AND CONCLUSIONS

A random sample of degree seeking adults on six campuses of the University of Wisconsin System were surveyed to determine what factors prompted them to return to school. Respondents to the survey were a very diverse group. However, a significant majority were women (62%), married (61%) and under the age of 40(85%). Over 80% had some postsecondary educational experience including nearly two thirds who had previously been enrolled in college. When asked why they had returned to school at the present time, a majority of the adults stated that they were seeking a degree so that they could either develop a new career or advance in their present one. Nearly half (48%) of the adult students surveyed indicated that job and family responsibilities had prevented them from completing their degree earlier, while another 17% indicated that it was a lack of interest and/or funds which had kept them out of college. The most frequently cited factors which triggered adults to return to school were job dissatisfaction, the availability of funds, and encouragement from family and friends.

The reader should keep in mind that the purpose of the present study was to gather some basic information about the adult degree seeking student. Consequently, although there may be many similarities between the undergraduate matriculant and other groups of adult learners, the conclusions listed below may not apply to the adult learner who is not seeking a bachelor's degree. With this consideration in mind, several firm conclusions can be drawn from the present study.

(1) In general, adult women are almost twice as likely to participate in a college degree program than are men. This is particularly true for students between the ages of 30-39 and may reflect the fact that women delayed their college education because of family responsibilities.

(2) Most adults attended a college or technical school at some time in the past. This confirms the oft-cited finding that the more education an individual has the more likely he/she is to continue education. It also suggests that for most adults the desire to attend college had been present for a long period of time but was delayed because of one or more transitory or situational barriers.

(3) Although both men and women must juggle the responsibilities associated with a job and family, women are more likely to be prevented from attending college by factors related to one's family, while more men must contend with full-time job responsibilities.

(4) Most adults return to school in order to develop a new career or advance in their present one. Many adults also indicated that they wanted to "achieve independence" which also reflects career-related interests. Only about 20% of the adults surveyed were "life-long learners" who were attending school primarily "simply to learn" or "to have the satisfaction of having a degree."

(5) Finally, there appears to be a moderate to strong relationship between the reason an adult delayed college entry and the triggering event. For example, most people who cited family responsibilities as a barrier reported that they had decided to enroll after those responsibilities had lessened. Likewise, most adults who indicated that job responsibilities or lack of interest had kept them out of school indicated that job dissatisfaction and encouragement played a major role in their decision to return to school.

Although some significant relationships between demographic characteristics and other factors were found in the present study the reader should keep in mind that adult students represent a heterogenous group with a wide range of needs and goals. The fulfillment of these needs and goals are influenced by an equally large array of internal and external factors which need to be further explored if educators wish to better serve the growing number of adults who wish to seek a college degree.

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AGENDAS OF RESEARCH NEEDS AS STIMULATORS OF RESEARCH

Edwin L. Simpson*
James R. Memmott
Northern Illinois University

Introduction

Assessments of needed research in the field of adult education have been made since Brunner (1959) reported the state of art as chaotic, and that sociologists and psychologists were doing our work for us. Following this announcement he produced one of the first agendas of needs (1960). Since that time a number of agendas of needed research have been published (Knox, 1965, 1977; Kreitlow, 1964, 1968; DeCrow, 1969; Copeland & Grabowski, 1971; Sork, 1980). Each of these had as its central purpose the stimulation of research.

Problem Statement

In a recent, comprehensive look at meta-research, Sork (1980) concluded:

> "... agendas or taxonomies of needed research (seem) to be of questionable value if (their) primary purpose is to stimulate research activity. If substantial or private funds were available to assist in the development of research thrusts, then such listings may well be of use. But with few exceptions, major funding for adult education has not been forthcoming.
>
> The true benefit of Type IV meta-research may be in identifying those research questions which, in the judgment of adult education researchers are in <u>their</u> domain."

In response to this assessment, the question may be asked by those responsible for furthering the interests of adult education and particularly for advising future graduate students in the field, "what does stimulate research in our field?"

The writers of this paper accept Sork's contention that listings of needed research, as previously prepared, have not stimulated research. They also accept the explanation, noted earlier by Knox (1965), that available financial support is a key factor in encouraging research interest. It is the hypothesis of this paper, however, that listings of questions needing research attention will attract funding--an intellectual energy as well--if they consist of issues which represent the mutual interest of practitioners and theory builders within the field and of influential persons or groups outside the field in society at large.

*Dr. Edwin L. Simpson and James R. Memmott, Graduate Studies in Adult Continuing Education, Northern Illinois University, DeKalb, IL 60115.

Methodology

In an effort to substantiate or reject this hypothesis, methods of content analysis and trend extrapolation were used. Procedures followed were:

1. the questions listed in Kreitlow's "taxonomy of needed research", as presented in "Educating the Adult Educator - Part 2" (1968) and those listed in Knox's "Current Research Needs Related to Systematic Learning by Adults" (1977) were subjected to content analysis and trend extrapolation;
2. the trend extrapolation was reviewed to identify an organizing principle;
3. potential funding sources for research questions falling within the domain of adult education were identified and the nature of their interests analyzed to determine whether there be available financial support for any of the merging themes;
4. recurrent themes found in the research reported in issues of Adult Education and in the proceedings of the Adult Education Research Conferences for 1979, 1980 and 1981 were analyzed;
5. the hypothesis was reviewed in the light of the results of the analyses conducted to this point;
6. a research agenda was developed which illustrates the hypothesis as supported by the research conducted herein.

The particular taxonomies analyzed were chosen because they satisfied the criteria of comparability and relevance. Both listings were considered by their authors as "agendas of needed research" intended to stimulate research. Both were expressed in the form of questions. The number of questions listed in each is almost the same--27 and 29--so that level of specificity is uniform. Differences on personality and/or perspective can also be ruled out in selecting Kreitlow's listing for the earlier analysis rather than Knox's 1965 article on two grounds. First, there is virtually no difference in emphasis between the two listings. Second, Knox stated that "Many of the questions (used in my article) were adopted from a list of questions in (the) study by Kreitlow." The use of the work of two so well-known and comparable authors seemed to minimize the possibility that one man's work could be considered atypical.

The technique used in Kreitlow's study was to survey twenty-eight prominent persons associated with education for adults using a checklist of thirty topics by which to determine priority. Knox, in his 1977 study, reviews the literature of adult education to identify "promising research questions." On the surface, these appear to be dissimilar methodologies. Closer examination, however, reveals that both authors canvased the work of prominent adult educators, the same persons for the most part. The only difference was that Kreitlow contacted them directly while Knox read their writings--a negligible difference which would not distort the results given the way they were used in this paper.

Findings

Through the analysis and comparison of the research agendas of Kreitlow (1968) and Knox (1977) three sources of research generation emerged, namely, issues of primary interest and use (1) to those responsible for delivering adult

education services, which shall be called "practical" concerns; (2) to those concerned with building and testing learning theory, which shall be called "theoretical" concerns; and (3) to those outside the field of adult education, which shall be called "societal" concerns.

More careful analysis of these themes revealed two additional categories of interest: (4) issues of concern which were generated by the interaction of practitioners and theoreticians within the field; and (5) issues of concern which were generated by the interaction of practitioners and/or theoreticians within the field and persons or groups outside the field of adult education.

A comparison of the 1968 list with the 1977 list yielded the following data:

RESEARCH AGENDAS		Practical	Theoretical	Interaction within Field	Interaction with Society	TOTALS	
1968 Agenda - Kreitlow	(n_1)	10	2	6	11	29	
	(%)	34.5	6.9	20.7	37.9	100.	
1977 Agenda - Knox	(n_2)	2	1	8	16	27	
	(%)	7.4	3.7	29.6	59.3	100.	
Differences		-27.1	-3.2	+8.9	+21.4		

This comparison shows a consistent movement of awareness of "needed research" away from a significant preoccupation with ones own interests and problems toward a significant concern for interaction with others, even those outside the field of adult education.

A review of potential funding sources revealed wide support for such interaction. In their "Research Grants Announcements", the National Institute of Education, a major funder of adult education research, described the nature of the research supported in the following terms:

> "... includes fundamental studies with long-range potential as well as research of more immediate significance for educational practice."
>
> "... encourages proposals from investigators with expertise in all of the behavioral and social sciences."
>
> "... reducing the correlations which now exist among education achievement and variables such as race, national origin, language background, socio-economic status and gender."

They continue, "The Teaching and Learning orientation to research recognizes that the quality of research is often enhanced by (1) bringing the perspectives of a variety of disciplines to bear on education-related questions; and (2) encouraging collaboration between investigators and educational practitioners in defining research questions and conducting research." and "Our research interests extend to the study of teaching and learning processes in settings outside of school and throughout the life span." In short, they are intending to fund research which has social value and which reflects collaboration between theoreticians and practitioners. N.I.E. is typical of funding sources in their stated purposes.

The review of recurrent themes in recent research in the field yielded the following list of research topics which fit the criteria established above and, thus, are not only apt to attract the attention of interested scholars if studied, but also are quite fundable. Likely funding sources have been identified for each.

Topics which promote interaction between practitioners and theoreticians with the field of adult education are adult development, adult learning, adult performance, cognitive style, evaluation, and impact studies. They are all funded by the National Institute of Education.

Topics which are of concern to scholars and practitioners outside the field of adult education but which are also clearly within our domain are:

	Likely Funding Source
Adult Development	Kellogg Foundation; Social Security Administration; National Science Foundation
Adult Learning	Kellogg Foundation; Office of Naval Research; National Science Foundation;
Community Education	Gerontological Board of the Public Health Service; Mott Foundation, Department of Labor
Competency	National Institute of Mental Health
Life-long Learning	Vocational Rehabilitation Administration; Department of Labor
Participation	Exxon Education Association
Professional Development	Professional associations and major corporations
Second Language Learning	National Institute of Education; Department of Labor

Conclusion

It is quite possible, then, to provide a listing of research agendas which is a priority for funding agencies and which offers themes currently under study, fundable and intellectually stimulating to a cross-section of interest groups. Unless there are other obstacles to their use in that way, listings which reflect consensus of concern within and outside our field will follow the trend in adult education research already evident.

This conclusion has several implications for adult education as a field.

1. The shift of research emphasis helps us track the maturing of our field. If a field of study can be likened to the maturing of a person or institution, it is to be expected that research will be devoted at first to the process of solving practical problems. As DeCrow observed in 1969,

> "In essence, the adult education reseracher has responded to the problems of practitioners rather than investigated social phenomena for their contributions to theory."

He called for "better and more linkages ... between researchers and practitioners to develop formal and informal communication channels for research exchange." The trend analysis presented in this paper demonstrates that the field has established those linkages.

Currently, scholars in the field are beginning to join forces with a wide variety of agencies in the search for answers to society's pressing problems. This reveals the approach of the interdependence which characterizes mature entities. It supports the contention of several prominent adult educators (Carlson, 1972; Mezirow, Darkenwald, & Knox, 1975; Griffith, 1976) that the future of the field lies in sharing our expertise with those who are addressing fundamental social, economic and political problems.

2. The phenomenon investigated here reveals that adult education research is being generated from a broader base of concern and therefore should be of interest and use not only to educators but also to social scientists, human resource developers, public officials and media specialists, to name a few. For example, it encourages adult educators to ally themselves with members of professional organizations working in such fields as training and career counseling (ASTD, ASPA, AVGA, etc.).
3. Those responsible for developing graduate programs in the field of adult education, or for advising graduate students regarding research projects need to direct their curriculum and advisement efforts towards a broader conception of our domain, one that seeks to include practical, theoretical and societal concerns in every dissertation and study.
4. Finally, the results of this study substantiates the value of a periodic review of needed research as a stimulator of research, providing the criteria of interaction demonstrated herein are observed.

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Some Programmatic and Instructional Implications of the Learning How to Learn Concept

Robert M. Smith
Northern Illinois University*

Many leaders in both general education and adult education (for example Dewey, Bruner, Dale, Apps, Bergevin, Knowles) have stressed the importance of helping people of all ages and levels of formal education to increase their effectiveness as learners and their ability to get the most from education. Apps has called helping people to learn how to learn one of the four major purposes of continuing education (1:98); Bergevin has stated that "Every learner ... needs training in how to carry on his special responsibilities in the learning process ... in how to learn" (2:140-141); and Knowles calls helping learners increase their ability to engage in "self-directed inquiry" one of only two kinds of objectives worthy of giving direction to adult education programs (6:209).

A variety of ways of assisting adults to learn more effectively and profit maximally from education have evolved from research and practice over the past three decades: laboratory (T-Group) training (10), participation training (10), teacher-student conversations with repertory grids (13), learning style mapping and diagnosis, "percept language" (8), learner (written) descriptions of how he or she goes about studying and perceiving the learning process (9), in-depth orientation workshops for students returning to higher education (12). And an increasing number of resources that combine theory and practice concerning learning about learning are making their appearance (4, 7, 12).

Despite widespread acceptance of the importance of learning how to learn and a growing amount of relevant activity, however, there has been considerable confusion as to the nature, dimensions, and boundaries of the concept. In 1975 the investigator began a series of efforts to clarify terminology, refine concepts and perhaps move toward a comprehensive theory of learning how to learn. This activity has taken the form of conducting twelve 40-hour workshops, a review of most of the relevant literature, and considerable reflection.

These efforts, reported in three publications (10, 11, 12), have been based on the assumptions that it is desirable and feasible to differentiate learning how to learn from learning and education themselves; and that a useful conceptualization of the matter under review should pertain to learning on one's own (personal learning projects), to collaborative learning (in face-to-face groups), as well as to learning in the more traditional setting usually associated with courses, classes, and credit. It has also been assumed that the clearing up of semantic confusion and conceptual clarification would accelerate communication among researchers, encourage developmental efforts, and aid in the dissemination of useful information to practitioners, clients, and individual adults seeking improved learning skill and the ability to get the most from education.

*Studies in Adult Education, LEPS Department, NIU, DeKalb, IL 60115

Among the outcomes of this activity are the following: (1) a definition of the concept, (2) a potentially useful way of looking at the matter in hand in terms of three interrelated subconcepts, and (3) some clarification of the relationship between learning about learning and learning for other aims and effects (12).

Defining the Concept

Because it is an emerging idea, gradually coming into focus, learning-how-to-learn does not mean the same thing to all the writers who underline its importance. For some writers the concept centers in mastering those basic skills so vital to much education, such as reading, writing, computing, listening, and studying. For some, the concept pertains to being more effective at learning and problem solving in groups. The mapping, modifying, and taking into account of learning style are also seen as relevant, as is study skills acquisition. The term is also used to convey the notion of learners becoming more autonomous or self-directed. For still others, the emphasis is on identifying the individual's processes of thinking and his or her "personal constructs" in such ways as to facilitate improved comprehension of subject matter and fulfillment of learning tasks.

Though each of these meanings has plausibility and utility, a broader definition seems essential for getting at the heuristic and practice implications of the concept: Learning-how-to-learn involves possessing, or acquiring, the knowledge and skill to learn effectively in whatever learning situation one encounters. One requires certain knowledge or skill for particular learning situations and tasks. Distance education, encounter groups, lecture series, and self instruction require somewhat different skills; practically no one is fully prepared for success in all four. Lacking such knowledge, one can be provided with training as needed to increase the chances of learning effectively. The term learning how to learn applies in either case -- i.e. to either "possessing" or "acquiring" the required knowledge or skill pertaining to learning itself. We feel that the term and definition can also subsume comfortably such terms as learning to learn, mathetics, and meta-learning which Maudsley (8) uses to describe "the process by which learners become aware of and increasingly in control of habits of perception, inquiry, learning, and growth."

Three Subconcepts

The breadth of this definition enables us to look at the concept of learning how to learn in terms of three subconcepts: needs, learning style, and training. We can ask what do learners "need" to know or be able to do in order to get the most from each subject, a procedure, activity, resource, and so forth. For example, an individual may need to know how to negotiate the higher education system or cope with "exam-anxiety" when learning through institutions. He or she may need group membership skills to learn through discussion or collaborative groups. And resource location and evaluation often become vexing problems for people conducting those personal learning projects of which we are now so aware as a result of the investigations of Tough and others.

Training constitutes organized activity for meeting the special type of needs just described. It can be self administered or provided by others. It

may range in scope from a ten minute improvisation to help a student cope with a minor obstacle to a semester long course dealing with the concept of learning how to learn and its implications for the adult educator and the adult learner.

Referring to training as efforts to help people learn more effectively and get the most from educational opportunities has several advantages. The term is short -- shorter than, say, "arranging for learning about learning," or "teaching students to learn." The term is associated with experiences of limited duration and relatively specific objectives. Moreover, more than instruction about learning may be involved: an educational programmer may decide not to use a method because the learners are not prepared for it; an administrator may choose merely to make a pamphlet available to all program participants on, say, "How We Learn" (or "How to Get the Most from Hustle College's Program"). The term allows us to talk about training needs: e.g. "these persons will require some training if they are to get the most from distance-education" (or from a study tour, or from a "non-traditional" degree program, or a course requiring the use of learning contracts). And we can thus communicate about such matters as training resources (e.g. Knowles' Self-Directed Learning), training designs (e.g. participation training), and training activities (e.g. keeping a log while conducting a learning project so as to become more skilled in this kind of learning).

The place or role of learning style in the learning how to learn equation is less obvious but it is gradually manifesting itself. It is the learner who is obviously at the heart of learning how to learn. Training of all but the most casual and rudimentary kinds tends to gravitate toward the need for bringing about increased sensitivity and awareness on the part of learners ("trainees" if you will) and adult educators ("trainers" when training becomes the objective). This self-awareness may concern such matters as how a person processes information, listens, prepares for exams, or goes about the self-teaching of a skill (4, 9, 13).

The learning style concept invites us and pushes us to accommodate to the research verified fact that people bring to education and to learning situations highly individualized preferences (for structure, method, feedback, affiliation, environment) and tendencies (to perceive, conceptualize, use the senses, process information, persevere). It is evident that learning style diagnosis provides a way for both educators and their clients to "see" more clearly the individual, to assist him or her to learn, to program and instruct in optimally appropriate ways (5). Learning style thus can be seen as a training resource. Learning style mapping represents an exceptionally useful training activity. And enabling people to gain insight into their individual learning styles provides them with means for getting the most from the educational offerings of institutions as well as projects they conduct on their own.

Needs, training and learning style support one another and interact to comprise a framework of subconcepts and terminology that are useful in operationalizing the often endorsed idea of learning how to learn. As needs emerge, training can be provided. Learning style diagnosis can point to needs that call for training. Training can employ learning style diagnosis as a central concept and activity. And style diagnosis can aid in the design of training activities.

Implications for Programming and Instruction

Adult educators and adult education agencies clearly work hard at providing myriad educational opportunities for grown-ups. It would seem that they would be doing an equally important service if they devoted more energy and resources to providing training opportunities. Implementing the learning how to learn concept makes sense "philosophically" because it is in line with the large share of the major "philosophical" writing, which advocates construing adult education as a means to helping people to mature, to become more self-directed, and increasingly responsible for their own decisions and for the improvement of the social order. Such activity also appears rational, for public agencies at least, on the grounds of accountability; for agencies can be said to have a responsibility to provide the taxpayer with skills for getting the most from the resources he or she allocates to education. It also appears a sound course for in-house educational programmers (e.g. directors of education in industry or hospitals), because enabling their organization's members to become skilled and knowledgeable vis a vis education and learning should result in the organization's realizing greater "learning productivity" from resources assigned to members' education. Lastly, it appears to be a "psychologically sound" course of action because learners and educators involved in applying the learning how to learn concept almost invariably report increased motivation and personal satisfaction -- from, for example, taking part in activities that are in line with one's learning style or receiving training in discussion skills prior to taking part in a series of discussion sessions (12).

Instructors who have grasped the implications of the learning how to learn concept report changes in the way they view the teaching-learning transaction and their choices of activities to employ when in contact with learners. They begin devoting more time to helping individuals to identify and cope with personal learning problems -- anxiety for instance. They may ask an increasing number of diagnostic questions aimed at understanding what activity is especially useful to the learner -- such questions as "What did you learn about learning itself today?" They may seek to discover how clients approach the learning of the particular subject with its concepts, methods of inquiry, and unique structural characteristics. They may tailor methods of presentation, feedback, and evaluation to the perceptual strengths and environmental preferences of the learners (12).

Some Issues

Among the questions that might be raised about the explanation of learning how to learn sketched above is this one: Is the conceptualization too all embracing? Does it appropriate "everything" and assign it to the learning how to learn sphere? A plausible reply would seem to be that the person fully sensitive to the concept will very often find a "learning how to learn dimension" in a wide variety of theory and practice -- in such disparate areas as research, programming, administration, instruction, and evaluation. For example, the historian or evaluator can ask,"Was inadequate understanding of the concept one factor in the failure, demise, or relative success of a movement, delivery system, or local program?" However, providing training for needs concerning learning and education themselves while taking learning style into account will certainly not preclude the necessity for agencies to offer leadership for a wide variety of educational programming and policy formulation and the many other

activities that go to make up this field of practice and its attendent discipline or field of inquiry.

If it be argued that the total concept is so elusive and difficult to hold in focus as to preclude widespread dissemination one may be tempted to agree. However, this charge best applies only to some of the more complex aspects and implications -- for example, to such matters as training design theory and the training of trainers. Experience has shown that adult educators and adult learners who are relatively unsophisticated with regard to theory, and to the distinction between content and process, can grasp and activate the concept in limited but quite useful ways. For example, merely coaching an adult to evaluate brochures and course descriptions, or to ask an educator how s/he takes learning style into account, may well constitute as valuable an activity as inventing another offering for the spring catalogue. And if it be contended that it is unrealistic to expect programming agencies to implement an idea that might be "used against them" by producing more sophisticated consumers of education, one can only take consolation from making the effort.

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Histories of American Adult Education: An Interpretation of Adams, Grattan, and Knowles

Harold W. Stubblefield
Virginia Polytechnic Institute and State University

In an article on "Sequential Research Needs in Evolving Disciplines of Social Practices," Malcolm Knowles said that historical research is most relevant at an advanced stage in the development of a social practice when it seeks respectability and justification. Adult education began to be recognized as a social practice in the 1920s and 1930s, and in support of this practice a research base has gradually appeared. But historical research is the least developed of these areas, for only three book length histories of adult education in the United States have been written. Published over an eighteen year period between 1944 and 1962, these books are: James Truslow Adams' Frontiers of American Culture: A Study of Adult Education in A Democracy (1944); C. Hartley Grattan's In Quest of Knowledge: A Historical Perspective on Adult Education (1955); and Malcolm S. Knowles' The Adult Education Movement in the United States (1962; 1977). The question addressed in this paper then is how Adams, Grattan, and Knowles sought to promote through their historical interpretations the acceptance of adult education as a social practice worthy of support.

In this analysis each book was treated as a primary source. The authors, while drawing upon sources for their material, also present their beliefs and values about adult education in the way they organize and interpret these sources and in the conclusions they draw. Three procedures were followed: First, each author and book were analyzed to identify the author's background and relation to the adult education movement, purpose for writing the book, the organization of the book, and the principal ideas advanced about adult education and its role in American society. Second, a comparison was made of how each author treated central elements in American adult education history: Lyceum, Chautauqua, university extension, the American Association for Adult Education, and the role of the federal government. Third, an analysis was made of the case that each author offered for the acceptance of adult education as a social practice of importance.

James Truslow Adams

Commissioned by the American Association for Adult Education with a grant from the Carnegie Corporation, Adams' Frontiers of American Culture appeared in 1944. It was the first history of American adult education. The idea for such a book had been conceived in 1936 when the AAAE initiated a series of 27 books under the title of "Social Significance of Adult Education." Frederick Keppel, President of the Carnegie Corporation, and Morse Cartwright, Executive Director of the AAAE, believed that the book should be written by a historian, not by someone with technical knowledge of or professional experience in adult education. Cartwright charged Adams "to interpret the entire American experience in adult education as an important manifestation in the development of a folk culture within the nation." (p. ix)

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The selection of Adams continued an AAAE practice of commissioning well-known figures for projects. At this time Adams was one of the best known historians to the American public, having received the Pulitzer Prize in 1921 for The Founding of New England. Though Adams' imminently qualified as a historian, he had no knowledge of adult education. The AAAE provided him with the materials -- the studies previously commissioned by the AAAE -- and Adams wrote the book for compensation. In addition to the AAAE studies, Adams drew upon his previous publications, particularly The Epic of America.

Adams begins by defining adult education and democracy. An adult, to Adams, was anyone past the age that one has normally completed school or college. As to the debate about the distinction between "cultural" and "vocational" adult education, Adams quickly dispenses with it by saying that what is cultural for one person may be vocational for another. Adams viewed education as broad as life itself; it may come through institutions, from life experiences, or from books.

Democracy for Adams was more than a form of government, and this distinction is important for understanding his interpretation. Democracy, Adams claims, was "a form of organization of human society in all its aspects in which the individual has a chance to help shape this own destiny and position, and to make himself count for what he is really worth." (p. 7) The United States was the most advanced form of democracy in the world, and in the American dream a man can advance as far as his ability will carry him.

The Frontiers of American Culture appears at first reading to be a chronological narrative, but it falls into two parts. The first part described the emergence of unique American institutions and personality until 1890. Adult education as such was not treated. For Adams, "The New America" of industrialization, urbanization, and technology began to appear in 1890, and this year marked the second half of the American experiment. In the second part, Adams drew upon materials from the "Social Significance of Adult Education" series to treat the modern period of American adult education history.

C. Hartley Grattan

Eleven years later in 1955, Grattan's In Quest of Knowledge appeared, and, like Adams, Grattan's book was commissioned but this time by the Fund for Adult Education, a ten year project (1950-1960) of the Ford Foundation to promote liberal education. In commissioning Grattan's book, the Fund wanted to show that liberal adult education had been a concern from early times and that it was deeply embedded in American life and thought.

A professional historian, Grattan had established his reputation through studies of Australia and the Southwest Pacific. He had also written books on American history, including the James family and William Jennings Bryan. The Australian National University awarded him an honorary Doctor of Letters in recognition of his fifty year association with Australia. In 1974 he retired as emeritus professor of history at the University of Texas; he died in 1980.

Lacking knowledge of adult education, Grattan hired a young historian, Howard Mahan, to do library research. He also traveled widely and talked with several people in the field of adult education. The Fund found the first draft unsatisfactory, and Cyril Houle and Lyman Bryson were asked to review it. Grattan used these comments in preparing a revised manuscript that was subsequently published.

He called In Quest of Knowledge a pioneer book in showing that adult education had been a perennial interest of mankind from the beginning of history. First, he traced in broad strokes the Western European background from preliterate man to the industrialized revolution. Second, he traced the British experience because it was the first nation to experience the industrial revolution and some American innovations had their precedents there. Third, he selectively traced adult education in the United States from the colonial period to the 1950s.

As to the definition of adult education, Grattan adopted Lyman Bryson's: a purposive activity with educational intent engaged in by adults as part of the normal routine of life. He agreed, too, with Bryson's classification of adult education as recreational, vocational, informational, and liberal. But adult education went beyond remediation, Grattan emphasized; it was addressed to "adults as adults" to help them live their lives more successfully. Grattan carefully distinguished the "education of adults" from "adult education." The educational world of adults, he believed, included all influences upon the adult mind, and adult education in comparison with the rest he considered only a "peripheral influence." "Education of adults" meant the environmental influences upon the adult mind; "adult education" meant international efforts to educate.

Grattan regarded adult education as one form of culture diffusion. Societies differed, he believed, in the ways that they disseminated knowledge, how they used adult education for its dissemination, and in the extent that knowledge was disseminated to all people. One way to close the gap between the intelligentsia who produced and consumed "culture" and the common man was through the diffusion of knowledge, and adult education was one way that the common people come to this knowledge.

Malcolm S. Knowles

Adams and Grattan were professional historians, uninvolved in the adult education movement, who wrote commissioned histories paid for by foundations. Knowles' Adult Education Movement stands in marked contrast. No one commissioned it, and Knowles worked in his professional career as an adult educator, not a historian. Until his appointment as professor of adult education at Boston University in 1959, Knowles had served in Massachusetts as deputy state administrator of the National Youth Administration, adult education director of the Boston and Chicago Y.M.C.A., and the first Executive Director of the Adult Education Association of the U.S.A. Prior to the 1962 publication of Adult Education Movement, he had written Informal Adult Education and two books with his wife, How to Develop Better Meetings and Introduction to Group Dynamics.

Knowles' book was a shorter version of his doctoral dissertation, completed in 1960 written under the direction of Cyril Houle at the University of Chicago. At the time of his dissertation, Knowles was the Executive Director of the Adult Education Association. While he had other ideas about a dissertation, he selected this study because of his concerns as AEA director and because he had access to materials.

Not only did Knowles' qualifications and circumstances differ from Adams and Grattan, but his intent differed. The questions that Knowles addressed grew out of his professional efforts to coordinate the field of adult education at the local, state and national levels. He saw adult education as more than just individuals striving to continue their learning or institutions providing opportunities for adults to learn as did Adams and Grattan. What Knowles studied was adult education as a movement, as a field, or as a social system. His particular concern was with the institutional segments, with identifying the process by which adult education developed, and with issues of and possibilities for coordination.

The Adult Education Movement (1) traced the development of institutions for adult education in four periods of American history, (2) traced the development of coordinative efforts for segments of the field and national organizations, and (3) drew conclusions about the nature of adult education and made predictions about future development.

The Histories Compared

The vantage point from which each approached his study resulted in different interpretations and emphases given to crucial events and developments. Four are singled out here for analysis: (1) treatment of significant adult education institutions, (2) the American Association for Adult Education, (3) the role of the federal government in adult education, and (4) the possibility of "rationalizing" adult education.

Of the many institutions in the development of adult education, three of the most important were the Lyceum, Chautauqua, and university extension. Adams, in his rudimentary classification scheme, treated the Lyceum and Chautauqua under the theme of "Adult Education as Talk." He did not assess their importance. However, he gave a chapter to university extension, noting that colleges and universities, along with libraries and museums were the three most important adult education agencies because they are more lasting. In Grattan's interpretation, the lyceum, Chautauqua, and university extension were treated as central institutions in the story of culture-diffusion through adult education. Knowles treated the lyceum, Chautauqua, and university extension within chapters on specific chronological periods and assessed their contribution to adult education methods.

Adams, Grattan, and Knowles drew upon accounts from the Carnegie Corporation and the American Association for Adult Education for their treatment of the AAAE. All three accounts were more descriptive than analytical or interpretative. Adams treated the AAAE in three pages, Grattan in ten, and Knowles in about 25. Both Grattan and Knowles explained the origin of the AAAE as the vision of Frederick Keepel for a unified field of adult education, and they saw the AAAE as a failed attempt to develop a permanent organizational structure to coordinate the field. Both allude to several

important factors but do not develop them: the AAAE as an instrument of Carnegie Corporation policy, as an experiment never intended to be a permanent organization, and as an adult education movement by an intellectual elite.

Grattan and Knowles viewed the role of the federal government as benign but not inconsequential. Grattan briefly described the federal role in the depression in public school adult education and labor education. Knowles treated adult education as a function of government agencies and the government as a source of finance. In other countries, he noted, the central government provided policy leadership, but in the United States the federal government has not done so. To Adams, however, the federal government's role in adult education was anything but benign. A critic of the New Deal and bitterly opposed to centralized planning, he had testified before the Senate Judiciary Committee in opposition to Roosevelt's plan to enlarge the Supreme Court, and he had supported Wendell Willkie for President in 1940. Federal financing of adult education, he warned, was dangerous: the government could use its power to promote propaganda. The government should not control the machinery for forming public opinion. Diversity in adult education was good, adult educators should oppose federal involvement: "My own impression, quite possibly wrong, is that American national education would do well to look to its birthright and turn its eyes away from the mess of pottage." (p. 298)

The most striking difference centered on whether adult education could be rationalized. Adams doubted it, he felt a sense of "suffocating helplessness" when he began to examine the adult education literature. (p. 128) He called it a "jumble" and when his rudimentary classification scheme could not accommodate something he put it in a chapter called "Olla Podrida," the name for a Spanish dish with a mixture of several things. Grattan called it a "jungle," difficult to rationalize, and perhaps should not be at all. Grattan put the parts he could not accommodate in a chapter called "Adult Education as an Omnium Gatherum." What created despair in Adams and Grattan challenged Knowles, and what Adams and Grattan could not do, Knowles did. He believed that the field of adult education could be rationalized, its constituent parts could be clasified and proper relationships be established among the parts. And this his book did.

The Justification of Adult Education

If Adams could not make sense of the adult education "jumble," he nevertheless recognized that in the modern America adult education had become indispensable. From 1890 to 1940, there were tremendous changes in American life. The new forces were so sudden and so powerful that one was not ready or capable of coping with them. Before, changes had been slow and persons adjusted through traditional lore, but now change had become rapid and new forms of education were required. Persons adjusted rapidly to new gadgets and to material things, Adams believed, but human nature -- beliefs, attitude, psychology -- did not change as rapidly. The basic problem was psychological, not economic. After the war, the young veterans would have to be fitted for new environmental change; they would have to learn their way in the industrialized world. The older generation needed to learn how to control "altered surface conditions," for their old experiences were inadequate to the task. The crucial educational tasks after the war involved all adults: study human nature, study altered conditions, and learn how to adjust. What Adams had observed as a natural occurrence before 1890 had now become an object of planning.

Grattan stood further from the crisis of the depression and the war than Adams and his study had carried him further afield. Cultural or liberal adult education did not depend upon altered social conditions for its justification. It was a perennial interest and need. But adult education had been most successful in vocational programs, least successful in cultural enrichment. "What we need today," Grattan said, "is education-in-depth as a defense-in-depth against the tragic life in which, God wot, so many villans flourish." (p. 304) There were inherent difficulties in the task of cultural enrichment, Grattan concluded. High culture and popular culture were far apart, people did not see the importance of the nonutilitarian, people felt culturally inadequate, and they believed that they could not learn. These were the "burdens" upon the adult educator, and his hero was "Sisyphus of Corinth eternally rolling his stone up the hill." (p. 310)

For Knowles, adult education had performed significant functions in each period of American history; it was deeply engrained in the American experience. With more an essay than historical analysis, Knowles concluded that adult had emerged as a separate part of the educational enterprise. New curriculum had been developed for adults, professional training in the university was available, a cadre of trained practitioners existed, and methods unique for teaching adults were now used. But the most telling justification for adult education as a social practice derived from social change so rapid and compressed that it created a cultural revolution within the lifespan of a generation. If this was true, and Knowles believed it was, education's purpose had to change from transmitting knowledge to children and youth to helping them acquire competencies for continual learning beyond schooling. In this new reality adult education became a normal activity of adulthood, and learning a "lifelong process." (p. 276)

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The Case of Jane Addams and the Revisionist Historians: A Framework for Writing a History of Adult Education

Harold W. Stubblefield and Thomas Hunt

Virginia Polytechnic Institute and State University

In the 1960s two revisionist approaches to the history of education appeared that are important sources for a conceptual framework for writing a history of adult education. The proponents sharply disagree, and their differences were recently highlighted in Ravitch's The Revisionists Revised (1978) and Revisionists Respond to Ravitch (1980). Rather than debate the merits of one or the other approach for adult education, this paper assesses the adequacy of both approaches to a specific historical event and person: Jane Addams and the Settlement House. Addams is an appropriate choice for the case study because she was a pioneer in the first stages of the modern adult education movement and because she has been studied by both schools of revisionist historians. Historical research in adult education needs an interpretative framework; it too often tends to be written as chronicle or description. Nevertheless, the conceptual frameworks that support both revisionist schools need to be tested for their adequacy for an adult education history. The first two parts of the paper examine the settlement theory of education that Addams formulated and the principal element of the two revisionist approaches to educational history. The final part examines the revisionist's interpretation of Jane Addams and assesses their significance for adult education history.

The Settlement Theory of Knowledge and Education

The settlement was but one of several institutions that emerged in the period between the Civil War and World War I concerned with the education of adults. But it was distinguished in several ways from Chautauqua, university extension, correspondence study, women's clubs, and the cooperative extension service. The first settlement was established in England in 1894, and transplanted to the United States by Stanton Coit who founded the first American settlement in New York City in 1886. Hull House in Chicago was founded in 1889.

The settlement workers were middle class, normally college educated, who took "residence" in the neighborhood. Some worked full-time while others worked full-time at their business or professional occupations and worked as residents in their leisure time. But the core feature was the neighborhood's sense of permanency of the settlement and the resident's belief that the neighborhood or locality could be developed in a "higher life."

The settlement thought of itself as a unique institution for the application of knowledge. By applied knowledge, Addams (1899) did not mean the application of technical knowledge to industrial concerns as polytechnic institutions did. Rather the notion of applied knowledge contrasted with the knowledge functions of colleges and universities. Colleges disseminated knowledge already accumulated;

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universities were organizations for producing knowledge. In contrast, the settlement was an organization of persons who sought to apply knowledge of a particular kind to a neighborhood: knowledge of literature, history, ethics, philosophy, and science to problems of the everyday life of people living in specific localities. Drawing upon the ideas of John Dewey and William James, Jane Addams claimed that "the dominating interest in knowledge has become its use, the conditions under which, and ways in which it may be most effectively employed in human conduct." Settlement workers were people who had "consciously formed themselves into groups for the express purpose of effective application." And "the depressed quarters of great cities" were "the spots where the dearth of this applied knowledge was most obvious."

Given the concern for applied knowledge, Addams and other settlement workers had to work out a supporting theory of education (Addams, 1899; Wade, 1967). That theory was rooted partly in Addams' autobiography, practical necessity, and the purpose of the settlements and partly in Addams' reaction to the restricted view of education held by public school educators and university professors.

The key element in this theory of education held that education had to be connected with life. Part of this understanding can be traced to Addams' early development when she saw her college education as preparation that postponed entry into the real world. She called this "the snare of preparation." Acquiring culture for the sake of acquiring culture had also been deeply unsatisfying. In her experience as a social worker she saw herself as a learner, not as a teacher. The neighbors were the teachers. Generalizing from this experience, she saw education as a mutual relation. Education was more than transmitting knowledge without exposure to experience; it involved interaction between pupils and teachers in the midst of life situations. Addams' ideas about education were similar to John Dewey's though it is hard to say which influenced the other the most. But both published their most important statements about education and society in 1899: Dewey's School and Society and Addams' "A Function of the Social Settlement."

Another element in this theory of education was derived from the purpose of the settlements, namely, to help the middle class to understand the poor. From the first, Hull House and other settlements included a study of social conditions through "observation and analysis." What settlement workers observed and experienced were in turn articulated through reports, articles, and speeches to help the middle class understand the experience of the working poor. Understanding the poor provided the basis for helping the poor.

The Revisionists Historians

Perhaps the outstanding representatives of the cultural revisionist tradition are Bernard Bailyn and Lawrence Cremin. It was Bailyn's Education in the Forming of American Society, published in 1960, which served as the watershed in interpretive American educational history. Armed with impressive credentials (an American historian at Harvard), Bailyn defined education "not only as formal pedagogy but as the entire process by which a culture transmits itself across the generations" (p. 14). Bailyn perceived the school, the formal educational institution, as one among many educational agencies in society. Other agencies, such as the home, the church, the workplace, recreational activities, social and political groups, also educated. Further, Bailyn contended, the past was not simply "the present unit small," it was "essentially different from the present" (pp. 9, 14).

Cremin, a luminary at Teachers College, also merits consideration due to his long-standing influence in American education. In one of his works, The Wonderful World of Ellwood Patterson Cubberley: An Essay on the Historiography of American Education (1965), Cremin advanced a number of points relative to the role of the school in the American past. For instance, he posed penetrating questions such as:

> What agencies, formal and informal, have shaped American thought, character, and sensibility over the years, and what have been the significant relationships between these agencies and the society that has sustained them? To ask the question thus is to project our concerns beyond the schools to a host of other institutions that educate: families, churches, libraries, museums, publishers, benevolent societies, youth groups, agricultural fairs, radio networks, military organizations, and research institutions (p. 48).

Along with their fellow cultural revisionists, Bailyn and Cremin generated much of the impetus toward broadening our vision of what education was (they did not accept the position advanced by Cubberley et al. that schooling, especially that conducted under public auspices, was equated with education), and they called attention to the reciprocal role of all educational agencies vis-a-vis their particular socio-political context. Finally, the cultural revisionists called for historical research in education to focus on the primary sources of all relevant educating agencies in order for more accurate, meaningful interpretation to be made and more light shed on the American educational past.

The radical (or social) revisionst historians[1] exploded on the scene with the appearance of Colin Greer's article, "Immigrants, Negroes, and the Public Schools" in the January 1969 issue of The Urban Review. Highly critical of what has been termed the "morality play" interpretation of educational history of Ellwood P. Cubberley et al., these historians collectively agreed that the public schools functioned as a vehicle for: (1) imposing middle-class values on lower class children; (2) reinforcing the boundaries of social and economic stratification; (3) preparing the children of the working classes for productive, efficient labor in the factories of the modern industrial state; and (4) instilling the virtues of "Americanism" or good citizenship in their youthful charges. Most of their research has focused on events in the several decades which preceded and followed 1900. (It was during these years that the nation experienced extensive immigration, industrialization, and urbanization. It was also during this time span that the public school system as we know it today was shaped.)

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[1]For general purposes the radical revisionist historians may be grouped together. However, it is well to note that there are differences in their ranks in terms of interpreting educational history. Usually listed in the group are Colin Greer, Clarence Karier, Michael B. Katz, Paul Violas et al.

The radical revisionsts, as Carl Kaestle has observed, challenged not only the assumption that schooling was equated with education, but also denied that, as was commonly believed, state-supported public schooling was benign in all of its aspects and ramifications. As Kaestle has further noted, these assumptions were largely unquestioned at least in part because professors of educational administration often doubled as educational historians, and tended to view public schooling in a good light. (One might add at this juncture that the role of the schools in "Americanizing" immigrants has been grossly exaggerated, given the fact, as Maxine Seller has pointed out, that most immigrants were adults at the time of their arrival. Of the 2,953,000 non-English speaking immigrants reported in the census of 1910, for example, 2,565,612 were over 20 years of age, thus past the limits of compulsory attendance legislation (p. 197).)

The radical revisionists, then, do not subscribe to the position that public schooling served as the ladder to success for poor children (immigrants and minorities) who had the required intellectual ability and fortitude. Rather, they maintain, the schools did just the opposite, holding these students down, and then blaming the victims of the inequitable system for their "failures." As one might assume, Marxist thought has had an influence (in varying degree) on Revisionist historians.

Finally, it should be noted that radical revisionist historians, like the cultural revisionsts, place considerable emphasis on the utilization of primary sources in their research. Here, too, they are critical of the traditional interpretations of the American educational past a la Cubberley.

The Debate About Jane Addams

The debate about Jane Addams illustrates some differences between the cultural and radical revisionsts. In The Transformation of the School, Lawrence Cremin, the leading educational cultural revisionist, praises Addams for embodying the highest ideals of progressive education: culture could be democratized and everyone could share in the sciences and arts (p. ix). In the settlement house idea and programs, Addams and her co-workers brought this ideal into concrete reality. They saw the central problem in working with the immigrants as the failure of the priviledged to share their culture with the poor, and the basic problem of industrialization as its effect upon human association. Settlement workers wanted to repair the split in community life through education and politics. In assessing Addams' work, Cremin concluded that "her view was essentially liberating and always equalitarian."

The radical revisionists treat Addams more critically. In a paper published in Roots of Crisis: American Education in the Twentieth Century (1973), Paul Violas characterizes Addams work as part of "a new middle-class liberal ideology" concerned with urban problems caused by industrialization and immigration. In Violas' view, Addams and the other middle-class liberals saw the solution to conflict as more effective social control through subordinating individualism to the larger claims of the community. Addams took from her childhood the image of the rural village as the ideal community and sought to impose it upon the urban slums. In bringing about this transition, education had a key role. Addams did not restrict education to schooling for children. Rather education encompassed the work of all social institutions and forces that affected how

adults and children thought. To help immigrants internalize these new values required the development of educational methods and the selection of appropriate content. Hence art, history, literature and play became important content in achieving this new sense of unity. Violas further contends that Addams believed the principles of mass psychology could be used for effective social control when such manipulation was controlled by the elite.

These two interpretations differ in many respects, but they differ particularly over whether Addams' work was "liberating" and "equalitarian." Cremin believes that it was; Violas believes that Addams sacrificed individual freedom for social unity.

Violas' paper did not escape the attention of the cultural revisionists. In The Revisionists Revised: A Critique of the Radical Attack on the Schools (1978), Diane Ravitch cites Violas' paper on Addams as an example of the problem encountered when a historian uses the past to support an ideology; she accuses Violas of taking quotations out of historical context to prove his point. In his reply in Revisionists Respond to Ravitch (1980), Violas scores Ravitch for misconstruing his interpretation and for the strident tone of her attack. The issue is joined. But what does this mean for writing a history of adult education?

Implications for Adult Education Historical Research

Of the two revisionist schools, the cultural educational revisionists provide the most comprehensive approach, the most compatible with the needs of adult education history, and the one most familiar to adult educators. In fact, Cremin (1976) and the other cultural revisionists mine the same ground that adult educators have mined for over fifty years. For confirmation of this, examine the Adult Education Handbooks beginning in 1936; Beals and Brody, The Literature of Adult Education; Adams, Frontiers of American Culture; Grattan, In Quest of Knowledge; and Knowles, The Adult Education Movement in the United States. One familiar with adult education literature wonders what the cultural revisionists have revised. The adult educator will be at home with the definition of education and the concepts of educative institutions, configurations of education, self-directed learning, and learning as a lifelong process. Any conceptual framework for adult education historical research has to begin with the cultural educational revisionists.

This conceptual framework is incomplete, however, without the ideological dimension of education that the radical revisionists emphasize. Particularly, the radical revisionists challenge adult educators to examine the consequences of educational interventions into the lives of adults, the motives of persons instigating the interventions, and values promulgated by the interventions. Even the Lyceum and Chautauqua, the most revered of adult education institutions, cannot be understood apart from the values and intentions of Josiah Holbrook, Lewis Miller, and John Vincent. Several adult educators, knowingly or unknowingly work within this framework in their critique of the growing professionalization of the field and the expansion of compulsory adult education. Carlson's The Quest for Conformity: Americanization Through Education is the only book length treatment of adult education from this critical perspective.

Adult education history is not served well by accommodation to one of these schools, however. To the contrary these approaches should be made to accommodate adult education historical research needs through a "sifting and winnowing" process. Adult education historical researchers have to start with defining

adult education history and describing its scope. That definition and description will be broader than the radicals because adult education history has to be more than ideology, but less sweeping than the culturalists because adult education history addresses one aspect of education. The story of Jane Addams and the Hull-House, written from an adult education history perspective, would tread the diffusion of the settlement house idea and its idea of adult education from England, the settlement house as part of the progressive movement and the progressive theory of education, the settlement house as innovator of adult curriculum and educational methods for the adult working class, the settlement theory of education and knowledge, and the relation of adult education to social change. This list is suggestive, not exhaustive.

Regardless of one's sympathies, the conclusion is clear: neither the cultural revisionists nor the radical revisionists have done the work that adult education historical researchers must do.

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THE RELATIONSHIP OF FIELD DEPENDENCE-INDEPENDENCE TO LEARNING APPROACH AND ACHIEVEMENT OF ASSOCIATE DEGREE NURSING STUDENTS

Susan Noble Walker*
Northern Illinois University

INTRODUCTION

The majority of associate degree nursing (ADN) programs are located in community colleges, and their enrollments reflect the heterogeneous composition of the community college student population, including many adult students with family and work responsibilities, a variety of prior educational and employment experiences, and a wide range of academic ability. Recognition of such diversity among students has led ADN educators to increasingly emphasize flexibility and individualization in instruction, in order that more students may have the opportunity to achieve success within these programs. This emphasis is consistent with the trend in American higher education described by Cross (1976) as a shift in goals from achievement of educational opportunity for all to achievement of education for each.

Although individualized instruction is a term which has been used in many different ways, several of its widely accepted characteristics have been identified as: (1) a shift in responsibility for learning from the teacher to the student, (2) a clear statement of learning goals or outcomes to be achieved by the student, (3) the organization of content into discrete lesson units or learning modules, (4) frequent feedback to students about progress toward or mastery of learning outcomes, and (5) allowance for alternative approaches to accomplishment of learning outcomes, consistent with individual differences in learner characteristics (Cross, 1976; Lenburg, 1975).

The development of effectively individualized programs requires an understanding of those student characteristics which are related to choice of and success with various learning approaches. Knowledge about which learners can benefit most from which strategies and structures for learning can be useful in designing curricula, planning instruction, and counseling students about learning. One learner characteristic which has only recently begun to receive attention among educators of adults is cognitive style, described by Messick (1976) as the characteristic and consistent modes of functioning by which individuals organize and process information and experience.

The field dependence-independence dimension of cognitive style (FDI), one of at least nineteen different dimensions identified to date, provides the conceptual framework for the present study. FDI has certain characteristics in common with all dimensions of cognitive style, in that it is: (1) concerned with the process rather than the content of cognition; (2) bipolar, with each extreme

*Associate Professor, School of Nursing, DeKalb, Illinois 60115

of the dimension having different cognitive characteristics; and (3) value differentiated, with each pole having adaptive value in different situations or spheres (Messick, 1976). Witkin emphasized that the bipolarity and value-neutral stance of cognitive styles are their most distinctive features, for they set them apart from abilities and make it possible for them to serve adaptive ends.

The evolution of the conceptualization of FDI can be traced through the writings of Witkin and his colleagues over the past thirty years, and has beer clearly summarized by Witkin and Goodenough (1981) and by Witkin, Goodenough, and Oltman (1979). An earlier conception of FDI as the ability to overcome an embedding context in perception, or to deal with a part of a field separately from the field as a whole, provided the basis for the various instruments developed to measure FDI, including the embedded-figures tests for individual and group administration in widespread use today. The field dependent person's perception is strongly influenced by the prevailing field, while the field independent person's perception is relatively independent of the surrounding field. Most recently, Witkin and Goodenough have suggested that FDI is best conceived as the tendency to function with greater or less autonomy of external referents. Field independent people rely more on internal referents and have greater cognitive restructuring skills, while field dependent people rely more on external referents and have greater interpersonal skills. These characteristics are evident in intellectual and social domains, including learning situations.

A comprehensive review of the literature relating FDI to student learning has been provided by Witkin, Moore, Goodenough, and Cox (1977). While most of the evidence linking cognitive style with learning approach comes from studies of elementary or high school students, a number of investigators have extended this line of inquiry to adult and higher education settings in recent years (Martens, 1976; Simpson, 1981). The applied research that has been done suggests that field dependent students prefer more interpersonal contact with teachers and peers, require more frequent feedback and greater externally imposed structure, and learn best when content is organized into smaller units, whereas field independent students prefer independent or individual study, require less frequent feedback, are able to provide their own structure when it is lacking, and are able to handle larger units of content. Such differences in learning preferences and behaviors appear to have significance for both the planning of individualized instruction and its effective utilization by students.

The present study was designed to investigate the relationship between the cognitive style and actual learning behaviors (rather than stated preferences) of students who were successful within an individualized instruction format. It explored the relationship of FDI and four other student characteristics to students' learning approach and achievement during the first nursing course of an ADN program.

METHODOLOGY

The research design was an ex post facto field study conducted in a midwestern community college ADN program. The program was

selected as the setting for the study because it had a flexible modular curriculum which (1) allowed students to choose individual or small group approaches to learning within both entire (semester) courses and individual (one week) modules; (2) provided students with feedback about their mastery or non-mastery of module learning outcomes via objective tests which were taken as many times as necessary, in alternate forms, until mastery was achieved; and (3) utilized the same summative evaluation measures with all students regardless of learning approach selected. The sample from which data were analyzed consisted of 162 students from an eligible population of 207 who had successfully completed the introductory nursing course during the years 1979 and 1980. Students in the sample were predominantly white and female, and included 146 who had enrolled in the course and 16 who had received credit by examination.

The independent variable of primary interest in the study was the students' cognitive style in the field dependence-independence dimension as measured by the Group Embedded Figures Test. Four other independent variables, included because of their possible association with learning behavior in the course, were the students' age, type of prior nursing experience (none, nursing assistant, or licensed practical nurse), years of prior nursing experience, and academic ability as measured by the ACT composite score. The five dependent variables in the study were three measures of learning approach and two measures of achievement within the course. Measures of learning approach included course learning behavior (enrollment or challenge exam), module learning behavior (number of modules successfully challenged by course enrollees), and module mastery behavior (number of attempts by course enrollees to achieve mastery on all 15 modules). Measures of achievement included cognitive achievement (score on a 100 item objective comprehensive exam) and performance achievement (whether students required one or two attempts to pass the course-end performance examination).

Students who participated in the study took the Group Embedded Figures Test administered by the researcher and completed a questionnaire developed by the researcher to provide data about age, type of prior nursing experience, and years of prior nursing experience. Students also gave consent for the release of their ACT scores and of information from nursing program records about their learning approach and achievement during the course. Five pairs of null hypotheses concerning the simple and multiple relationships between the five independent variables and each of the five dependent variables were tested statistically, with the level of significance for the rejection of each null hypothesis set at .05.

FINDINGS AND CONCLUSIONS

The nursing students in the sample were found to be more field dependent as a group (mean GEFT score=9.09) than the liberal arts college students comprising the norm group (mean GEFT score= 11.27) described in the test manual (Witkin, Oltman, Raskin, & Karp, 1971). The sample exhibited great diversity in FDI, however, with individual scores ranging from 0 (extremely field dependent) to 18 (extremely field independent). Several of the student characteristics were significantly correlated to each other, complicating the interpretation of their relationships with the dependent

variables. FDI was correlated with academic ability (r=.527, p<.001), years of prior nursing experience (r=-.271, p<.001), and type of prior nursing experience (r=-.167, p=.034). Type and years of prior nursing experience were related to each other (r=.733, p<.001). and each was also correlated with academic ability (r=-.163, p=.039 and r=-.234, p=.003, respectively).

Point biserial correlation and Pearson product moment correlation were used to test the five hypotheses concerning the simple relationships, and multiple correlation analysis (stepwise multiple regression) and discriminant analysis were used to test the five hypotheses concerning the multiple relationships between the student characteristics and each of the measures of learning approach and achievement. All five pairs of null hypotheses were rejected completely or partially. Due to space limitations, those findings and conclusions concerning the relationships between FDI and the various measures of learning approach and achievement will be emphasized.

FDI was found to have a significant simple relationship with module mastery behavior (r=-.332, p<.001) and with cognitive achievement (r=.308, p<.001). Relatively field independent students required fewer attempts to achieve mastery and achieved higher cognitive examination scores. However, FDI was not a significant contributor to the multiple relationships of student characteristics with either module mastery behavior or cognitive achievement. Academic ability was the only significant contributor to the multiple relationship with module mastery behavior (R=.470, R^2=.221, p<.01), and academic ability and years of prior nursing experience (in a negative direction) were significant contributors to the multiple relationship with cognitive achievement (R-.608, R^2=.370, p<.01).

Type of prior nursing experience and FDI were found to be significant contributors to the multiple relationship of student characteristics with module learning behavior (R=.365, R^2=.133, p<.01). Relatively field independent students with a higher level of prior nursing experience tended to successfully challenge more modules within the course. FDI was not found to be simply related to either course learning behavior or performance achievement. However, when stepwise discriminant analysis was performed to identify those student characteristics which could be used to distinguish between course challengers and course enrollees, and between students who required one attempt vs. two attempts to pass the performance examination, FDI contributed to the discriminant function in both instances. In the first instance, 38% of the variance in course learning behavior was explained by the multiple relationship with type of prior nursing experience, years of prior nursing experience, and FDI, in descending order of importance. The direction of the relationship indicated that relatively field independent students with a higher level and more years of experience were more likely to be course challengers. In the second instance, only 10% of the variance in performance achievement was explained by the relationship with type of prior nursing experience and FDI. Students with a higher level of experience who were relatively field independent were more likely to pass the performance examination on the first attempt.

DISCUSSION

Previous research has indicated that students who choose interpersonally oriented vocations, such as nursing, tend to be relatively field dependent (Witkin et al., 1977). Although the nursing students in the present study were more field dependent on the average than the GEFT norm group of liberal arts students, their mean score was almost precisely at the midpoint of the FDI continuum. Since more broadly based norms have not been established for the general population, it is not possible to know whether the present sample indeed tended toward field dependence.

The literature suggested that field dependent students would choose learning approaches which involved interaction with others, while field independent students would choose more solitary or individual approaches. In the present study, ADN students generally chose group learning over individual learning as reflected by the number of modules challenged. Approximately 30% of the students did not challenge any modules, and another 35% challenged only one module of a possible ten. FDI was found to enter into a multiple relationship with both measures of solitary vs. group learning (course learning behavior and module learning behavior). The fact that students with more previous experience in nursing were more likely to be successful at challenging both the entire course and its individual modules was anticipated, since the major purpose of such an open curriculum was to allow upward mobility within nursing. When the contribution of one or both of the variables which measured prior nursing experience was accounted for, however, FDI also became a significant contributor to the multiple relationships of student characteristics with both course learning behavior and module learning behavior. As predicted from the literature, when prior experience was accounted for, field independent students were more likely to challenge the entire course and its individual modules.

The literature also suggested that field dependent students required more external feedback than did field independent students. Within the nursing course in the present study, module mastery tests provided such feedback. FDI was found to be simply related to module mastery behavior, with field dependent students requiring more attempts to achieve mastery. Students with lower ACT scores also required more attempts to achieve mastery. As previously observed, FDI and academic ability were moderately correlated; when the contribution of academic ability to the multiple relationship of student characteristics with module mastery behavior was accounted for, FDI did not make a significant further contribution. The simple relationship of FDI to the number of module mastery attempts was apparently attributable to its correlation with academic ability. Goldstein and Blackman (1978) stressed the importance of including a measure of intelligence or academic ability in studies of FDI. That importance was evident in the present study.

The present study undoubtedly suffered from lack of precision in control, common to field studies conducted in the real world. Although the correlations found between FDI and student learning behavior were of low to moderate magnitude, the relationships which surfaced, as well as the preponderance of evidence from the literature, suggest to the researcher that this is an area worthy of continuing investigation. If the applied knowledge base is to

grow, there must be greater consistency in treatment of data from one study to another. In particular, it is recommended that data from measures of FDI be treated as continuous for purposes of analysis, rather than categorized in the variety of different ways now evident in the literature.

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Effects of A Self-directed Learning Project and Preference for Structure on Self-directed Learning Readiness

Kay Wiley*
Northern Illinois University

I. INTRODUCTION

The purpose of this study was to investigate the effects of a process-oriented self-directed learning (SDL) project and the personality trait preference for structure on the SDL readiness of baccalaureate nursing students. Because many nurses need to use the SDL process to help maintain their professional competence and because some nurses say they need help using this mode, nurse educators are urged to teach their preprofessional students how to direct their own learning. For that reason some nurse educators ask: does teaching the SDL process to nursing students increase the SDL readiness of all, none, or some students? That question was the focus of this study.

The conceptual framework for this investigation had four components: SDL projects, SDL readiness, preference for structure, and continuing professional learning. An assumption of this researcher was that the personality characteristic preference for structure interacts with the experience of an SDL project, and that this interaction influences the student's SDL readiness and his/her future continuing professional learning style. This assumption was supported in the literature reviewed.

A self-directed learning project was defined as a learning activity for which the learner takes the initiative and major responsibility for the learning process (ANA, 1978). Using Tough's (1971) criteria for an adult learning project, the researcher stated that this SDL project must involve at least seven hours of learning time. In contrast to a self-directed learning activity, an other-directed learning activity, such as a conference, workshop, or programmed instruction module, is a learning activity in which someone other than the learner controls most of the learning variables. Investigators of adults' learning activities (Denys, 1973; Penland, 1977; Tough, 1971) have found that adults, across both class and culture lines, conduct about eight learning projects per year and that about 75 percent of these projects are self-planned. Tough also found that some adults need help using the SDL mode.

In order to define self-directed learning readiness and develop an instrument to measure this construct, Guglielmino (1977) reviewed the literature and surveyed 14 SDL authorities. Guglielmino concluded that SDL readiness, broadly defined, was having attitudes, abilities, and personality characteristics which are needed for self-direction in learning. Many educators (Dressel & Thompson, 1973; Kidd, 1975; Knowles, 1973; Rogers, 1969) agree that a major goal of education should be helping the learner to be self-directed in his/her learning. No investigation was found, however, on the relationship between teaching the SDL process and SDL readiness.

Preference for structure was defined by Bunt (1978) as the bipolar tendency of individuals to be dependent upon authority. Several investigators (Berlin, 1965; Bunt, 1978; Stern, Stein, & Bloom, 1956) have studied the relationship between preference for structure and the degree of classroom structure. Classroom structure was defined in terms of the degree to which the student could influence the learning procedure. For example, a class was labeled low in structure if students were encouraged to help determine class procedures and presentations. Generally speaking, these investigators found

*Kay Wiley, R.N., Ed.D., Niehoff School of Nursing, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, IL 60626

that there was an interaction between the degree of classroom structure and the trait preference for structure so that the students showed no significant gains for any classroom treatment. In fact, Stern and his associates found that college students who preferred high structure were agitated by and hostile in low-structured classes. Since an SDL project is a learning situation in which little structure is provided for the learner, it seems likely that there is a trait-treatment interaction so that having students conduct an SDL project does not result in an overall gain in students' SDL readiness.

Investigators of nurses' continuing professional learning found that other-directed continuing learning offerings (e.g. conferences and programmed instruction modules) are not meeting all of nurses' learning needs (Curran, 1977; Kathrein, 1981). Thus it appears that nurses must engage in SDL activities in an effort to maintain their professional competence. Kathrein also found that some respondents said they would use the SDL mode more often if they were given assistance with this mode. Comments like these led some educators (Cooper, 1978; Reinhart, 1977) to recommend that the SDL process be taught in nursing curricula. The implication of this recommendation was that teaching the SDL process would facilitate nurses' use of this mode for their continuing professional learning. This researcher concluded that the relationship between teaching the SDL process and SDL readiness should be investigated.

The researcher hypothesized that, when pretest SDL readiness was controlled:

1. Students who experience a process-oriented SDL project score higher on posttest SDL readiness than students who do not have this experience.
2. Students who prefer low structure score higher on posttest SDL readiness than students who prefer high structure.
3. Students who experience an SDL project and who prefer low structure score higher than all other students on posttest SDL readiness; and students who do experience an SDL project and who prefer high structure score lower than all other students.

II. METHODOLOGY

The two independent variables were a process-oriented SDL project and preference for structure; the dependent variable was posttest SDL readiness, when pretest SDL readiness was controlled. Preference for structure was measured by Ginther's (1974) Reactions to Statements (RTS); SDL readiness, both pretest and posttest, was measured by Guglielmino's (1977) Self-directed Learning Readiness Scale (SDLRS).

Construct and concurrent validity of the RTS and construct validity of the SDLRS were already established by their authors. Using the Cronbach Alpha procedure, internal reliability estimates were computed for both instruments. For the RTS the estimate was 0.775; for the SDLRS the estimate was 0.910. Both instruments were judged valid and reliable for this study. The SDL module, prepared by the researcher for this study, was reviewed by two faculty who had taught the SDL process for about ten years. These faculty stated that the SDL module would facilitate students' learning the SDL process.

To examine the relationship among the research variables, a nonequivalent control-group design (Campbell & Stanley, 1963) was used. In this two group design, both the treatment group and control group are pretested on a variable that is well correlated with the dependent variable. After the experimental group receives the treatment, both groups are posttested on the dependent variable. For this investigation, both groups were pretested on their preference for structure and SDL readiness. Then the experimental group conducted a 12-hour process-oriented SDL project. After the treatment was completed (about

ten weeks after the pretests were given) both treatment groups were posttested on their SDL readiness. Because the treatment groups were similar, but not equivalent, the pretest SDL readiness scores were used as a covariate in the statistical analysis. This procedure tends to compensate for nonrandomness.

The sample consisted of all junior nursing students (N=104) who were attending a large, urban, Catholic university where a Bachelor of Science in Nursing degree is offered. When this study was conducted, the students had self selected one of four sections of a nursing course that teaches six processes including the teaching-learning process. Two sections (N=50) were designated to be the control group who conducted a teaching project; and two sections (N=54) were designated to be the experimental group who conducted an SDL project.

Demographically, both treatment groups were similar on identified variables. In each group, about 85 percent of the students were 20-21 year old Caucasian Catholics; and in each group there was one male student. Using a two-tailed t-test, it was concluded that the two groups did not differ significantly on either their preference for structure (P>.24) or their pretest SDL readiness (P>.84). It should be noted that when all 16 faculty (8 for each treatment group) were measured on these variables, it was concluded that the two faculty groups did not differ significantly on either their preference for structure (P>.25) or their SDL readiness (P>.42)

Before the treatment began, faculty of the experimental group were instructed on how to teach the SDL process. On the first day of the semester, the researcher instructed all students in the experimental group on the SDL process and project; then the students conducted the project with the guidance of their faculty. Because the researcher was one of the faculty teaching the SDL process, she was able to assess how the other faculty were teaching the SDL process. Data obtained from her observations indicated that these seven professors were relatively knowledgeable about and skilled in teaching this learning mode.

There were four limitations of this investigation. First of all, both research instruments were self-report instruments and therefore subject to the usual problems associated with measuring the affective domain. Secondly, only one research site was used; thus, generalizations beyond a similar population are not possible. Thirdly, the SDL project was a small project; limitations of the school setting prevented a more extensive treatment. The last major limitation was that neither the students nor treatments were assigned at random.

Data were analyzed using regression analysis of covariance, with pretest SDL readiness being the covariate. Null hypotheses were stated in the appropriate format for multiple regression analysis. The level of significance of 0.05 was used to test these null hypotheses. Kerlinger and Pedhazur's (1973, p. 270) F-ratio formula was used for tests of significance.

III. FINDINGS

Neither preference for structure nor experiencing a processs-oriented SDL project contributed significantly to the variance in posttest SDL readiness. Both F-values were less than one. Although no hypothesis was stated regarding the correlation of preference for structure and pretest SDL readiness, a Pearson Correlation coefficient was computed. The coefficient was -0.1206 (P>.11). A negative correlation was expected because students who prefer low structure were expected to score high on SDL readiness.

However, the interaction of preference for structure and experiencing an SDL project did contribute significantly to the variance in the dependent variable. For a follow-up analysis, the variable preference for structure was changed into three ordinal categories: (1) preference for low structure (scores 19-33), (2) preference for medium structure (34-39), and (3) preference for high structure (40-52).

Data used for the follow-up analysis were residual scores, representing a student's SDL readiness gain or loss that was beyond what was predicted. From the common slope and intercept, a predicted posttest score was computed for each student. That score was then subtracted from the student's actual posttest score to obtain the residual score. Lastly, a mean residual score was obtained for the three structure groups within each treatment group. These six residual-score means are reported in Table 1 and are depicted in Figure 1.

In that figure and table it is apparent that the experimental group of students who preferred low structure had a residual-score mean that was 10 points higher than the control group of students who preferred low structure. A Simple Effects test showed that this difference was significant ($P<.05$). When preference-for-high structure groups were compared, the experimental group had a residual-score mean that was 7.6 points lower ($.10<P<.25$) than the control group's mean. The shift occured in the preference-for-medium-structure range.

IV. CONCLUSIONS, DISCUSSION, AND IMPLICATIONS

From this investigation it was concluded that:

1. Teaching the SDL process did not increase the overall SDL readiness of these baccalaureate nursing students.
2. Preference for structure did not affect students' SDL readiness.
3. Students who preferred low structure and who experienced an SDL project gained in SDL readiness. It also appeared, but was not conclusive, that students who preferred high structure and who experienced an SDL project lost in SDL readiness.

There are at least two possible explanations for the lack of overall gains in SDL readiness for the experimental group. One explanation is that, as Rogers (1969) suggested, a longer treatment period is needed to allow all students time to adjust to the SDL mode. Another possible explanation is that the students in this program do learn how to direct their own learning. This explanation is supported by the fact that, although the experimental group gained an average of 6.0 points in their SDL readiness, the control group gained an average of 4.8 points without conducting an SDL project. However, this gain may be attributed to the regression effect.

The variable preference for structure did not affect the students' SDL readiness. This was probably because human beings are so complex that one variable does not explain a construct such as SDL readiness.

The interaction between preference for structure and experiencing an SDL project was a finding that was similar to the findings of Stern et al. (1956). It appeared, but was not conclusive, that students who preferred high structure were annoyed by the low-structured SDL project.

After the investigation was completed, the researcher questioned the effects of age, within the young adult cohort, on the research variables. Because the age-group sizes were small and unequal and because the range of ages was small, no conclusions were stated. However, it appeared that the older students (age 23-42) and younger students (19-22) were similar in their preference for structure, pretest SDL readiness, and posttreatment SDL readiness gains/losses.

Based on the research findings, the following implications and suggestions for practice are made:

1. Since preference for structure seems to influence learners' reactions to an SDL experience, it is recommended that learners be measured on their preference for structure using the RTS. Persons who score below 40 could be taught the SDL mode in the manner it was taught in this study.
2. It is not clear how prescribed learning of the SDL process affects individuals who score over 40 on the RTS. However, learners who prefer

Table 1

Residual-Score* Means for the Three Preference-for-Structure Groups Within Each Treatment Group

Treatment Group	N	Residual-Score Mean	Absolute Difference in Means	Total N	Weighted Mean
Preference for Low Structure (scores ranged from 19 to 33):					
Experimental	21	+2.839	10.016	35	-1.167
Control	14	-7.177			
Preference for Medium Structure (scores ranged from 34 to 39):					
Experimental	16	+2.266	2.502	36	+0.878
Control	20	-0.236			
Preference for High Structure (scores ranged from 40 to 52):					
Experimental	17	-3.387	7.573	33	+0.285
Control	16	+4.186			

*Residual scores = actual SDL posttest score - predicted posttest score

Figure 1

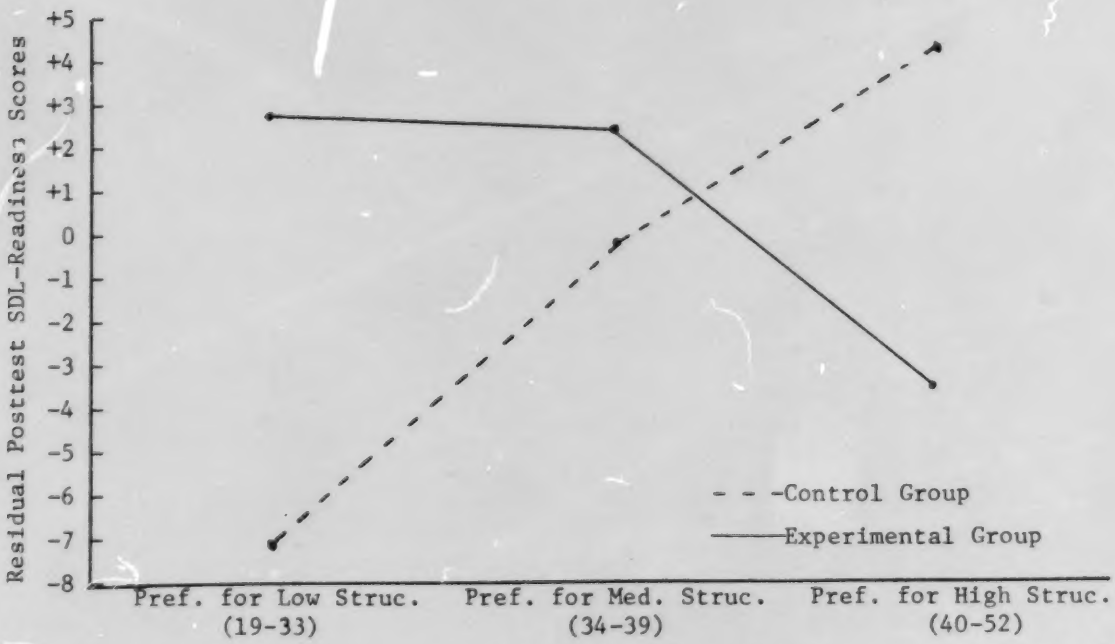

Figure 4. Between-Treatment-Group Differences in Residual-Score Means for Three Preference-For-Structure Groups.

high structure may best be served through assistance in self-structuring, as an added component to the SDL instruction.

2. There was tentative evidence that students who did not conduct an SDL project did become more able to use the SDL process. A possible explanation for this increased ability was that the school's curriculum, i.e. using learning labs and learning modules, may have increased students' ability to direct their own learning.

Recommendations for future research include: (1) replication of this study in various schools and/or with various types of adult learners, (2) explore the effects of the age variable on the research variables, (3) using only learners who prefer low structure and learners who prefer high structure to explore differencces in the extremes.

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PUBLIC PARTICIPATION AS AN ADULT LEARNING EXPERIENCE

Joan Wright*
North Carolina State University

Background

Legislation that calls for various levels of government to conduct water resources planning generally requires that such planning include a public participation component. Presumably, affording the public an opportunity for oversight of planning activities is a means of ensuring that planners do indeed determine and protect the water resource interests of the public.

Public participation, however, need not be considered as a quasi-adversarial activity in which the publics (relatively powerless, inexpert, and unorganized) attempt to keep the planners (in full authority by dint of office, expertise, and control of resources) honest. An alternative view, and one that is consonant with much of the language of planning legislation, is of public participation as an educative activity. From this perspective the function of public participation is to ensure that planners learn which publics have interests in water resources, what those interests are, how those interests are perceived to be jeopardized or protected, and what choices the publics prefer when interests conflict. At the same time the publics learn (if they are not already aware) that their interests are at stake in decisions about water resources. They must learn, if they are to express informed preferences, what those interests are and how they conflict. Furthermore, they must learn how the planning process is organized and how they may participate in it effectively.

The research described in this paper was undertaken from this perspective. It is an evaluation of the public participation effort of a major water resources planning study, in which an essential outcome is presumed to be learning. It is descriptive, covering the intended nature of public participation and the activities actually conducted. It is exploratory, looking for relationships between the public participation effort and learning reported by the actors involved. It is a case study, focused on public participation in the North Carolina portion of the Yadkin-Pee Dee Level B River Basin Study undertaken by North and South Carolina in cooperation with the U. S. Water Resources Council.

The research addressed the following questions:

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*Department of Adult & Community College Education, Box 5504, Raleigh, NC 27650

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1. Is it appropriate and useful to view public participation in planning as an educational process?

2. What were the components of the public participation effort, and what relationships were found between then and evidences of learning?

3. What shaped the public participation effort in the Yadkin-Pee Dee Study?

4. What problems and issues were encountered in this public participation effort?

Methodology

Throughout the course of this evaluation the research team was allowed to observe all public events. They were able to use participant observation techniques for more than a year. During that time members of the team provided advisory and staff assistance to the public participation coordinator, arranging for meetings, telephoning committee members, preparing materials, and suggesting possible meeting formats. This permitted access to much of the deliberation regarding public participation in the Study, as well as to the water resources issues involved.

Documents available for analysis included Study newsletters, reports, issue papers, mailing lists, mewspaper clippings, and internal communications regarding public participation.

At three points during the Yadkin-Pee Dee Study survey research techniques were used to gather data from selected groups of informants. Figure 1 shows the relationship of the surveys to progress in the planning study.

Figure 1. Relationship of surveys to organization of Yadkin-Pee Dee Study

Plan of Study Phase I	Existing Plan Phase II	Alternatives Plan Phase III	Draft Recommended Plan - Phase IV	Final Report-V
Summer '79	Spring '80		Winter '80-'81	
1st survey (CAC members (Non-member residents (Planners	2nd survey (Task Group Advisors		3rd survey (Persons on Study mailing list (Residents of rural county (Planners	

Soon after the first phase of the Yadkin-Pee Dee Study, during which study foci were identified and the Plan of Study prepared, telephone interviews were conducted with 23 Citizen Advisory Committee (CAC) members, 25 non-CAC Basin residents, and 16 planners. If the public participation component (public workshops, initial CAC meetings, news releases) of the first Study phase had been effective, planners and CAC members would have learned their own and each other's roles in the Study, and would have an idea of the contributions to be made by the Study. Residents of the Basin comparable to CAC members would be aware of the Study though probably less familiar with its details.

A second telephone survey was begun about three months after the public meetings held for CAC members and the general public on the Existing Plan phase, in which the probable effects of current and projected influences on water resources in the river basin were described. Interviewed were 43 persons who had volunteered to serve as Task Group Advisors (TGA's), thus indicating their special interest in one or more of the Study's Task Groups. They were questioned regarding the extent of their involvement in the Study; their grasp of the Study's substance; and their readiness for the TGA role.

The final survey was conducted after the Study's most intensive period of public involvement, at a time when planners were preparing a draft of recommendations that had been selected from the alternatives considered in Phase III. Mail questionnaires were distributed to all persons on the Study mailing list. Information from this group included the nature and extent of their involvement in the Study; their familiarity with problems and solutions proposed in the Study; their satisfaction with the public participation effort; and the special interests they represented.

Another mail questionnaire was sent to planners--the 16 employees of the Level B Study and the lead state agency who had been involved in one or more of the public meetings. They were asked about their involvement, satisfaction, and learning regarding public participation in the Yadkin-Pee Dee Study.

At the same time data were gathered by telephone interview from a random sample of 200 residents of a rural county typical of the river basin. The interview was designed to find out what proportion of the residents were familiar with the Study, whether familiarity was related to occupation or place of residence, how they had learned about the Study, and the extent of their familiarity with and involvement in the Study.

Findings from the Surveys

First Survey: Among planners interviewed at this early stage of the Study there was considerable diversity of opinion regarding public participation. No more than four of the 16 planners agreed on any one problem related to public involvement; agreement as to what would constitute public participation other than the Citizen Advisory Committee meetings was minimal, and preferences as to the proportion of planning resources to be devoted to public participation ranged from five percent to more than 20 percent.

There were also differences among and between planners and members of the subbasin CAC's as to the responsibilities expected of each. About half the planners expected CAC members to become informed and give feedback to the planners. Less than half of the sample of CAC members saw their role as giving feedback; only a third indicated an intent to become well informed. In regard to the planners' roles, two-thirds of the planners felt that some or all planners should keep CAC's informed and one-third felt planners should seek input from the CAC members. The CAC members interviewed emphasized the information-providing role of staff most frequently, with soliciting and responding to CAC concerns next in frequency of mentions. A number of planners and CAC members did not know what to expect of staff or of lay persons in the Study.

The sample of non-CAC member residents, similar to the CAC members in familiarity with the actors in and previous involvement with water resource planning, were less aware of water-related concerns and of the complexities and tradeoffs involved in considering these concerns than CAC members. More CAC members had reservations about the value of the Study and their ability to contribute to it than did non-member residents.

From the first round of interviews, these conclusions seemed evident: (1) the professionals working on the Yadkin-Pee Dee Study did not have a clear consensus on the nature and purposes of public participation in the Study; (2) there was a lack of shared role expectations within and between the CAC members and planners; and (3) Advisory committee members were more knowledgeable than residents about the problems which the Study would address, but were perhaps more skeptical as to the value of the Study and their ability to contribute to it.

Second Survey: Of the 43 TGA's interviewed, 27 were CAC members. Their involvement in the Study was similar to that of the non-CAC members who had volunteered to work with one or more Task Groups, including attendance at one or more public meetings, reading Study materials, and discussing the Study with others.

Only seven persons did not know or had no opinion on the Study's accomplishments to date. Fourteen believed it had created public awareness of water resource limitations and problems; the same number believed it had accomplished little or nothing. Non-CAC members were more likely to hold this negative opinion than CAC members.

Only five persons cited no problems with which the Study was concerned. About two-thirds of the TGA volunteers described multiple problems, and of these more than half were matters at issue. There was little difference between CAC members and non-member informants as to the number or nature of problems addressed by the Study. Controversy about these problems was more likely to be seen by CAC members than non-members, and then over a single issue (e.g. interbasin transfer or riparian rights). Nearly half of the non-member TGA's were aware of no controversy.

CAC members' suggestions for planners to consider as solutions to water resource problems seemed to converge around a few themes, while all of the suggestions from non-CAC members were different. Persons in both groups had expressed their suggestions to planners; CAC members were concerned that their input was not recognized, while non-members were concerned that their input was not sought.

Almost a third of the persons interviewed were not aware of the Task Group Advisor idea; less than half had expected to be involved as a TGA. Even though most thought it was a good idea, less than half gave a reason for or qualification of this judgment.

Conclusions from the second round of interviews included the following:
(1) while a few TGA volunteers were well-versed in a wide range of the technical aspects of the Level B Study, the majority were not; (2) informants lacked knowledge concerning the role and functions of the Task Group Advisor; and (3) many were generally familiar with one or two issues confronting study participants, but expected the staff to inform/educate them as to the technical details if that knowledge were necessary in choosing among alternative paths of action.

An implicit assumption appeared to be that the real choices would be made not for technical but for political reasons, about which local people felt well qualified to determine and express local interests.

Third Survey: Persons on the Study mailing list had been especially targeted for public participation through their expressed interest in the Study, their positions in local government or special interest groups, or their CAC membership. The 211 respondents (43.8 percent response rate) differed in the nature and extent of their involvement in the planning effort, with 58 percent receiving the newsletter, 43 percent attending meetings related to the Study, 20 percent serving as CAC members, and five percent functioning as Task Group Advisors. They also differed in personal characteristics and learning and satisfaction regarding the Study.

Correlational analyses revealed that age and education are related to the time spent on participation, with better educated and younger persons likely to devote more time to the Level B Study than less educated or older persons. The various aspects of participation are generally related to each other. While the relationships between opinion/learning variables and aspects of participation are not all statistically significant, satisfaction was positively related to every aspect of participation. Respondents were more likely to identify more potential CAC activities as appropriate and to prefer more frequent meetings if they had been more involved in the public participation effort. Familiarity with problem solutions and belief that solutions cause problems were also positively correlated with increases in several of the aspects of participation. Among the five learning/opinion variables familiarity with problem solutions was positively related to each of the other four variables.

Using multiple regression to find out which participation aspects contributed most to predicting satisfaction, familiarity with problem solutions, and belief that solutions cause problems, the most important single predictor for all three was the weighted activity level of the participant.

All 16 planners responded to the self-administered questionnaire. When asked how much they had been involved in public participation in the Yadkin-Pee Dee Study, nine planners said 'a great deal', six replied 'some', and one 'a little'. More than half had helped to plan public participation; had attended one or more meetings; had prepared materials for distribution to the public or for use at meetings; and had made oral presentations at meetings. When asked to rate their satisfaction with seven specific efforts of public involvement, few planners expressed either very high or very low satisfaction with any effort listed. Planners appeared to be consistently more satisfied with their own contributions to public participation than with the publics' contributions. Their satisfaction was not related to the extent of their involvement.

The planners were asked to indicate for each of 10 controversial statements whether they thought the Yadkin-Pee Dee planners would generally agree or disagree. In general, planners who support the publics' right to participate tended to be more satisfied with the public participation effort in the Yadkin-Pee Dee Study than those who were more skeptical about the benefits and importance of public involvement.

All but one of the planners said they had learned something about public acceptance or understanding of water resource planning from their involvement in the public participation effort. Two themes emerged: making the content of planning understandable to lay people is essential but very difficult and demanding; and people tend to relate to immediate and specific matters (e.g. particular projects) more than to long-range and abstract policy issues. Nine of the 16 respondents said they had learned something about the roles and responsibilities of planners from their involvement. While every planner reported learning at least one thing from experience with the Yadkin-Pee Dee public participation effort, there appeared to be no relationship between the number of things learned and planners' satisfaction or involvement levels.

About 15 percent of the persons interviewed in the telephone survey of the rural county were aware of the Yadkin-Pee Dee Study. Most had read about it in the newspaper, although news coverage was more effective in the towns than in the country. Less than half of the persons aware of the Study had discussed it with anyone; those who had were more familiar with problems addressed by the Study and more likely to perceive some consequences if the Study had not been conducted. Awareness of the Study was not related to employment or place of residence. Judging from this county, the public information component of the overall public participation effort resulted in only superficial familiarity with the Study.

Conclusions

1. Public participation in planning is regarded by both planners and participants as an educational experience for the public. Becoming familiar with the technical content of planning was seen to be largely the responsibility of the publics, with the planners playing a facilitative role.

Although planners indicated that it was desirable to have public opinion to inform their work, they did not have a clear idea of what they wanted to learn from the publics or how best to go about it. The roles of publics and planners were not well learned (or taught) in this planning effort, although planners gained skills in communicating with the publics throughout the Level B Study.

2. Although more involvement was associated with more learning on the part of the publics, no one technique for public participation was clearly superior to another as an educational process. Direct involvement (public meetings) was costly but contributed to the publics' familiarity with the content (problems, solutions, issues) considered in the Study. Indirect information efforts (news coverage) were less expensive but were limited to awareness-building. To be most effective, the two components should be complementary.

3. The public participation effort was shaped less by preconceived ideas of representativeness, desired outcomes, and means-ends relationships than by changing demands and circumstances imposed by the nature of the planning project, the sponsoring agency, and to a lesser extent, the publics. Skills in identifying, negotiating, and responding flexibly to these demands are vital for public participation efforts.

DEMOCRATIZATION OF MATHEMATICS: A LIBERATORY TEACHING AND LEARNING PROCESS THROUGH MATHEMATICS

Marcelo Zwierzynski
Northern Illinois University

INTRODUCTION

As the young slave discovers through dialogue the diagonal of a square, Socrates provides one of histories first examples of the democratization of mathematics. The Socratic inquiry, in its search for the roots of our identity, discovers the source of our choice—our moral and political wills. Discarding innate ideas, Socrates recognized the singularity and ephemeral nature of the knowledge by which we recognize ourselves. Through development of a critical method, Socrates liberated individuals from blind adherence to static self-concepts, opening in this way new spaces for action and for thought.

A fundamental aim of liberatory education is to establish and specify relationships between knowledge and power. One strategy of power is to reconstruct knowledge in such a way that power appears inevitable, logical, eternally given. To the extent that power succeeds in establishing itself as "natural," it is invisible—it blends into the background and is transparent. The analysis of knowledge must take into account this strategy of power. From this point of view what is important is to determine how "truth" is produced historically. This demands an analytic framework which determines how truth is produced and the effect such "truth" has on the exclusion, invalidation, and disqualification of other truths and forms of knowledge.

Educators define knowledge in the context of institutions which legitimize the knowledge/power strategy chosen by their own power elites. From this point of view, pedagogies are techniques for the creation and transmission of the "essential imagery" needed to maintain existing power relationships.

The role of liberatory educators is to create knowledge which counters the invisible truths of dominant and dominating institutions. Such educators challenge political, economic, and institutional powers with the aim of liberating truth from the hegemonic matrices in which truth is currently defined. In our society mathematics is such a matrix—an essential framework for the determination and validation of knowledge. Our starting point in teaching mathematics—as in all liberatory education—is daily life and its problems. We have to discover in daily life the ways to recover the power to produce knowledge. In a democratic society, knowledge must be grounded in the possible. That is, the people's truth emerges in the direction of concrete options for action and social transformation. The withering of democratic options leaves people passive as knowledge adjusts to inaction. In our own society, decisions, even on very elementary levels, are increasingly left to specialists. The capacity of a few to decide is supported by the same knowledge which underlies the passivity of the masses.

Citizenship becomes consumerism, as power is handed over to specialists who transform society before a host of docile onlookers.

Through my research I have developed a way of teaching mathematics which explores the relationship between knowledge and power, and which transforms this relationship into a tool for increased democratization. An essential first step is the democratization of mathematics itself.

METHODOLOGY AND RESULTS

This research focused on adult illiterate or semi-illiterate migrants, and was organized around three educational objectives, using mathematics as a means:

1) To develop methods by which adults can learn to build abstractions. Illiterate migrants are usually able to make very rich descriptions, but they are unable to communicate through rational abstract thought.

It is useful to divide human mental faculties according to two functions. The first function is global or parallel assimilation, the other is logical and sequential reasoning. With the first function, information is processed through senses working in tandem, due to the complexity and diversity of information. Examples of this are the assimilation of a caricature of a real person or the recognition of scents (which usually involve extremely complex chemical vectors). The second function is illustrated by the syllogism. The most important characteristic of logical reasoning is its temporal and sequential development. Logical reasoning is most consistent with the theory of sets in mathematics. From this theory, it is possible to develop organigrams, equivalencies of the different mathematical languages, and to define algorithms (including the "logic" of computers and their utilizations).

However, is it possible to utilize mathematical methods in the case of global assimilation? This question is equivalent to another: to what extent are cultural phenomena able to be assimilated into logical structures? All procedures used in the analysis and synthesis of parallel inputs (for example, sound and image) lie in the possibility to transform this parallel input into sequential information. Such transformation results from the imposition of value. For any given social phenomenon, it is possible to build up several kinds of logical systems, assuming we approach reality with different values. Any system of logic, with its internal consistency, can provide a tool for viewing reality, but that system is not reality itself.

2) To introduce adult migrants to decision-making processes, particularly those used for the optimization of situations regarding their economic behavior.

When we compare the world from which migrants come with the reality they are facing in big industrial cities, it is easy to understand their need to redefine the nature of their relationship with the new environment.

The walker has become a driver and moves within a complex network of streets and roads. The shopkeeper is, in the new reality, a "distributor," and the craftsman has become a technician, the guardian of machines. Such a new and complex world will become comprehensible only with the introduction of a more highly developed language. Facing this situation, most migrants give up an active role and transfer their decision-making responsibilities to specialists or computers. As individuals become spectators, consumers, and clients, to what extent can mathematics allow them to regain control and understanding? To what extent can people with mathematical skills again make basic choices affecting their lives?

In the past, mathematics has generally not dealt with these questions. Most daily problems are essentially combinatorial, since most common situations in daily life are choices between alternatives. However, mathematics for the last 300 years has been limited, for the most part, to the analysis of continuous functions which are not appropriately applied in these combinatorial situations. Nonetheless, many formulas and applications can be developed as a basis for economic decisions, predictions of the future, social mobility projections, and the analysis of lottery games.

3) The demystification of numbers as criteria of objectivity in facing daily life problems.

Hegel identified rationality with reality, proclaiming reason to be the most privileged instrument for knowledge. In today's world, objectivity and rationality are bridged almost exclusively by quantification methods. Mathematics has increasingly become the most accepted criteria for determining objectivity. Clearly, one of the most difficult problems in rational decision-making prior to action is the conversion of objectives into criteria which serve as the basis for choice. Mathematics is often used as a criterion, but has limited applicability.

A mathematical approach to decision-making might begin by breaking down a vast body of possible options into classes and then determining the way in which these classes are distributed. This approach assumes the exercise of our preferences and choices—again, the imposition of values—in the establishment of classes. In this way the limits of objectivity and statistics are elaborated in reference to consumerism, political choices, etc. Historical options are created by men and women; they imply a multiplicity of situations related to the evolution of power. Their description and definition through quantification necessarily involves a political choice.

CONCLUSIONS

Mathematics, especially numerical mathematics, can be liberatory or oppressive depending upon how it is used. Through this research, I introduced adult learners to mathematics as a liberatory alternative in the learning process. It wasn't the purpose of this research to define alternative axioms for a new theoretical paradigm. Our work was conceived as a necessary elucidation regarding the continuing conquest of knowledge for the purposes of action. In striving for this objective, several means for the democratization of mathematics were developed.

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SYMPOSIUM

ADULT EDUCATION RESEARCH AND DEVELOPMENT: COMPARING THE UNITED STATES AND THE UNITED KINGDOM

Michael Collins, Chair*
Kansas State University
Visiting Assistant Professor,
University of Saskatchewan.

Stephen Brookfield
Research Officer, National
Advisory Council for Adult
and Continuing Education (U.K.).

Robert Carlson
University of Saskatchewan

David Williams
Kansas State University

INTRODUCTION

Typically, comparative studies in adult education have tended to focus on the institutional structures of agencies in different countries. While this approach plays an important part in establishing the field of comparative adult education, we need more than structural-functionalist accounts if stereotyped interpretations are to be avoided.

The presenters in this symposium, all of whom have experience in North American and British adult education settings, critically assess both the similar emphases and distinctive areas of research and development which have emerged in both countries. Besides discernible commonalities, very different political realities and priorities can be identified.

One presenter from the U.S.A. and another from Britain address various facets of the research endeavor in each country. A third presenter, from Canada, provides a critique of the two presentations and refers appropriately to American and British influences on adult education research and development in Canada.

The overall intent is not so much to compare institutional frameworks as to illuminate traditions, priorities, cultural determinants, and philosophical aspects.

A BRITISH PERSPECTIVE
(Brookfield)

As has been suggested elsewhere in these proceedings (Brookfield 1982) the stereotypes of British and North American adult education researchers held in both countries are rooted in reality. North American research is viewed by British adult educators as cast heavily in quantitative mould, characterized by a reliance on statistical analysis and experimental research designs. It is seen as exemplifying the 'agricultural-botany' model of investigation, which seeks to apply the methods of the natural sciences to the study of human behavior. British research, on the other hand, is seen as exhibiting a certain literary grace, a concern for abstruse philosophical questions, and an obsession with resolving historical problems. In a sense, these perceptions reflect wider cultural attitudes held by citizens of both countries - the frenetically efficient

*Continuing Education, University of Saskatchewan, Saskatoon, Sask., Canada S7N 0W0

American (as seen by the British) and the dreamily antiquated inefficiency of the British (as seen by the Americans). The following few comments are intended to explore the accuracy of these perceptions.

There is certainly a wide disparity between the scale of the research enterprise in the two countries. In North America there is sufficient material for researchers to engage in meta-research; that is, research into adult education research. Typical of such activity is Boshier and Pickard's analysis of citation patterns in the American ADULT EDUCATION journal (1979) or Huey Long's study of the publication activities of selected professors of adult education (1977). Long's finding that the adult education professors he surveyed published in over 300 journals provides a graphic illustration of the richer opportunities which exist for the dissemination of research in North America. There are over 2,500 holders of doctorates in adult education in North America, but in Britain the figure would not be one-twentieth of that total.

Graduate training for adult education researchers is markedly different in Universities in the two countries. In the United States, a registrant for doctoral candidacy would be expected to have amassed a good number of course credits in adult education. Typically, he or she would have taken courses in program planning and evaluation, adult psychology, instructional procedures and, possibly, the history and philosophy of his field. Most certainly, an exhibited measure of research competence would be expected, such competence being reflected in successfully completed courses in statistics, experimental design and research methodology. By way of contrast, candidates for doctoral study in British Universities would not typically be required to undertake preliminary course work prior to registering for their degree. They would tend to be accepted or rejected according to the quality of their application, their previous academic record, and their performance in interview. They would be much more likely to present something approaching a fully fledged doctoral research proposal when applying for admission to a doctoral degree. Once accepted, the research would begin almost immediately under the supervision of an individual member of staff.

There is also a significant difference between the two countries with regard to the research methodologies deemed to be appropriate and admissible at doctoral level. A British researcher would have little problem convincing senior professors of adult education of the merits of qualitative approaches; that is, using an exploratory grounded theory approach in order to determine emergent central concepts and employing open-ended interviews and participant observation as valid data collection techniques. My impression (and I realize this may be erroneous) is that the use of this kind of methodology is much harder to justify to doctoral committees, tenure review boards and editors of learned journals in the United States. The following quote from a British guide to adult education research is instructive in this regard:

> "It is observable that few adult education research strategies rely solely on quantitative data ... such data are likely to have limited value and the deductions to be made must be heavily qualified". (Fielden & Chadwick, 1979).

I would submit that an American guide to new researchers in adult education would only allow the preceding quote to be published were the word 'qualitative' to be substituted for 'quantitative'. The assumption seems to be that the road to academic acceptance as a serious discipline in the United States lies in the adoption of the techniques of the natural sciences. Again, this may reflect broader cultural differences since the phenomenology of Husserl, the empathetic

reconstruction of the mental states of historical figures of Collingwood, and the verstehen sociology of Weber, are approaches all of European origin. However, this may reflect my own personal preconceptions since, as I have indicated in an earlier paper in these proceedings, American leaders in adult education exhibit an openness to alternative methodologies, an acceptance of hard and soft approaches, and a rejection of methodolatory.

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9.5 THESES ON ADULT EDUCATION RESEARCH IN AMERICA (APOLOGIES TO LUTHER)

(Williams)

1. Much research in American adult education, like practice, is dominated by the drive to make money. Often the generation of knowledge is a clearly secondary concern.

2. Because of this, two research foci prevail: participation patterns and marketing strategies.

3. After the plethora of research on adult education participation in the 1960's and 1970's, further intense inquiry is as useful as asking why teeth get fillings.

4. Research on marketing adult and continuing education is so caught up in the methods and literature of business administration and management science that it would be better completed in those academic units.

5. The largest segment of research in adult education is done by students. Like the fetus in the womb of a heroine addict, the adult education student is likely to have passed to him or her the usual agony and occasional euphoria of stolid allegiance to quantitative methodology.

6. Quantitative methodology, commonly implanted in all areas of educational research, reflects the assumption that the field of psychology holds all principal keys to training researchers in adult education.

7. Funding for American adult education research is scant and, when provided, is usually insufficient to enable researchers to maintain good faith with intended project goals.

8. Among the particles of fallout from methodological and funding restraint is neglect of important, even potent areas of research concern. Among these are examination of the profession's lack of impact on national policy, explorations of the field's history and philosophy, if any, review of legal issues, inquiry into program accreditation and quality assurance (e.g., whether or not credit for experience is credit for existence, whether or not some non-traditional learners are non-learners), and experimentation in long-term training of teachers of adults or, if one wishes, of andragogical facilitators.

9. Other academic areas, particularly higher education and vocational education, view the research domain (and student pool) of adult education as fertile territory for their own thirsty hordes of researchers (and recruiters) and, with superior political savvy, they are moving in.

9.5 Because of such incursions, apperceptions, limitations, and identity crises, the field of adult education and its research continue to reflect the status of half a profession.

CRITICAL OVERVIEW
(Carlson)

Are the differences between U.S. and British adult education research noted by Brookfield and Williams the result of cultural - national differences? Or are they tne result of individual experiences and personalities? Then again, are such experiences and personalities the result of cultural - national differences? It is hard if not impossible to tell, yet it is important to reflect on such issues as this. Such reflection enables adult educators to get beyond the immediate "how-to-do-it" problems to significant questions of why to do it and whether to do it.

Brookfield and Williams make the case that research in adult education in the two countries has taken different tacks. In Britain, the humanistic orientation seems to dominate. In the United States, empiricism has held sway.

Notions big and small can be adduced to try to explain this important difference. Some evidence exists in the cultural and national realm. Approaches to the education of adult educators differ in the two countries and must have an influence. Do British students have more time and freedom to deal with crucial issues because of their small number, the availability to them of liberally-educated tutors, and the way their programs of study are structured? Are small, neat, mechanistic, empirical studies the logical outcome of the U.S. universities' frenetic efforts to turn out more and more graduates ever more quickly? Are the expectations of British and U.S. students different? How important is reflection in their priorities? Conversely, how important is the receipt of that "piece of paper" as soon as possible?

It is in English-speaking Canada where these values can most easily be seen in juxtaposition and in conflict. Canada has relatively few graduate programs. The humanistic influence has been strong thanks to people like Ned Corbett, H.M. Tory, and Roby Kidd. The empirical influence has been equally strong because of the contributions of American imports and the tendency for Canadian academics to get their training at empirically-oriented U.S. land-grant institutions.

Several personal experiences, however, suggest that the struggle may not be entirely U.S. values versus British values. Despite some anomalies, there seems to be sufficient plausibility in Brookfield's cultural argument to support his view that British adult educators seem "interested primarily in philosophical and historical concerns explored through qualitative modes of enquiry" while North American research is "preoccupied with quantitative measurement to the exclusion of any appreciation of the subtleties and nuances of human behavior". Brookfield is also probably right when he notes that "the virtues which practicing researchers in the two countries hold dear are regarded as unfortunate and misguided aberrations by their transatlantic counterparts". As has been noted, not everyone in North America fits the model; nor does everyone in Britain. The tendencies and predominances are there, however.

Now, what to do about this? The very question is quintessentially American and pragmatic, of course. It is not the "natural" question, as some Americans might assume. Nonetheless, it is a question to which I've been asked to respond. My most direct answer to the question, "What shall we do about this dichotomy?", is one word: "Nothing." Let the British go on considering the "why" questions and allowing non-conforming compatriots to do the occasional empirical studies that seem appropriate. In the United States, continue the opposite pattern. As more and more students and researchers in each country get interested in the other kind of research, help them to get involved.

I suppose my response is part of the annoying trait that Aulis Alanen of Tampere University calls my individualist approach. Let individual students and faculty do what interests them and relax. The managers, administrators, and efficiency experts won't probably accept this notion. They want to know which approach is the most efficient and are inclined either to choose one or the other or to try to combine the two in some systematic way that allegedly preserves the best of both and eliminates the worst.

It seems to me, though, that the British should be congratulated for being British and the Americans for being American. He or she who wishes to defect should be honored by British, American, and Canadian alike. The important point, it seems to me, is that there be created and maintained a sufficiently visible body of literature for every research orientation and style in adult education. Whether we need to explain these orientations in terms of nation and culture is probably not that important. What we do need to do is to honor and encourage different approaches to adult education research or at least leave in peace those individuals whose orientations we don't particularly value. Let there be differences. Let there be pluralism. And thereby let there be light.

SYMPOSIUM THE REVISIONIST PERSPECTIVE: A CRITICAL LOOK AT THE HISTORY OF ADULT EDUCATION IN THE UNITED STATES

Kathleen Rockhill, Chair
University of California at Los Angeles

Robert A. Carlson
University of Saskatchewan

Sue Davenport, Organizer*
Northern Illinois University

Whose interests does an educational program serve? Who has the power to shape the form and content of the curriculum? Do educational movements manifest high social concensus or conflict? How does the specific historical context affect an educational institution - the underlying economic forces, political movements and power structures, social trends, ideologies of the period, the cultures of different social groups involved?

How do educational experiences shape how individuals perceive and act upon the world? How do they shape motivation and aspiration? How do home, school, work and community interact in the formation of social character?

Are educational programs effective economic reforms or are they created instead of such reforms? Should the proliferation of educational institutions be hailed as enhancing individual opportunity and freedom of choice or decried as further intensifying stratification in society? How does today's trend toward vocational training and credentialing mask the worsening economic conditions in the U.S.? How do prescribed curricula, like CBE and the GED, for example, stifle people's critical awareness of themselves and society?

Over the past fifteen years educational historians writing from a radical perspective have posed these and related questions. Labelled "revisionists," they have attempted to revise the liberal perspective that had dominated the history of American education in the post-World War II period. The critical perspective of Michael Katz, Samuel Bowles and Herbert Gintis, Marvin Lazerson and others has challenged a more optimistic point of view that celebrates the broad, pluralistic opportunity of education as a unique element in the American "paideia," or national ethos, as developed by historians of education Bernard Bailyn and Lawrence Cremin.

While the revisionists focused particular attention upon the historic development of the American public school system, the questions they raised are relevant to all educational practice in our society, including the field of adult education. Often adult educators have perceived their work to be taking place outside institutions, developments in the field over the past fifty years, however, especially in the post-WWII period, have placed it squarely on the same path to institutionalization, bureaucracy, and professionalization as other educational fields.

Comparing the different assumptions about historic process and about the methods of studying history will make the differences between liberal and radical revisionist perspectives clearer. The optimistic view of the plurality of educational opportunity in American society is grounded in a philosophy of liberalism. Liberalism, as used here, derives from the long

2434 N. Spaulding, Chicago, Illinois 60647. 312-227-5412.

philosophical tradition running from the Enlightenment beliefs in progress, rationality, humanitarianism, and democracy, through Adam Smith's classical economics to John Stuart Mill's untilitarianism and positivism. Liberal, progressive, and humanistic philosophies of education all share underlying liberal assumptions, especially a commitment to the individual, to democracy in its present forms, to rationality, and to freedom of choice. They may differ, though, in their emphasis on the individual or society, for example, or on ideas, problems, or the self as the focus of education.

The radical revisionist position has roots in several schools of thought, including critical theory, phenomenology, and neo-Marxist economics. It is part of an international trend in educational theory and research, ranging from a British emphasis on the sociology of education, French explorations in existentialism and phenomenology, to Third World perspectives on education as a tool of imperial domination, as analyzed by Paulo Freire and others. They are critical of liberal democracy as practiced in capitalist societies; of bureaucracy as a stultifying social force in any economy; and the persistence of class inequalities of power and wealth.

As the liberal and radical positions differ on assumptions about society and history, they also differ on questions of historic method. Three main methodological issues between the liberal and radical revisionist viewpoints involve questions of context, perspective, and categories of analysis.

In the case of context, the question is whether the history of education is a specialized field, sufficient unto itself, or must draw on economic and political history, as well as social and cultural events, for a full understanding and interpretation of educational ideas, movements and institutions. Radical revisionists argue that political and economic conflicts underlie all efforts to allocate services and resources in society, while liberal historians regard the economic and political structures as adjuncts, but not as essential to understanding education.

Considering perspective, the issues involve the viewpoints both of the historical subjects and of the historian. First, whose viewpoint should the historian consider? That of the leaders? elites? reformers? professionals? the public? a middle class? a ruling class? a working class? Must they all be considered and interrelated? Historians have often found it easier to write the histories of people who have left written records, and that has favored a history of leaders and institution builders. Political movements of the 1950's and 1960's forced the consideration of forgotten viewpoints - of labor, blacks, women, to mention a few. Historians have used both quantitative and qualitative methods to locate and infer the actions and views of the masses, the participants and witnesses who did not write memoirs.

A second issue in viewpoint involves the historian's own viewpoint. Is the historian a neutral and objective observer seeking to craft truth from elusive sources? Liberals tend to presume objectivity, that their work is politically neutral and value-free, and that an unbiased approach to sources will allow truths to emerge.

Radical revisionists generally reject the canon of academic neutrality and objectivity as an ideology that masks the reality of any intellectual

work. They argue that an essential human quality is to have a viewpoint, and that selection of research topic and method, as well as argument and interpretation, imply a viewpoint. From this perspective, it is the historian's responsibility to clarify his/her viewpoint and set forth assumptions at the outset. Otherwise, the assumptions operate sub rosa to select and shape the history written. Radical revisionists prefer to declare their sympathies and adversions and write history as critical advocates. The quality of scholarship rests not on its neutrality, but on the density of evidence and logic of the argument.

A third methodological issue between liberals and radicals is their categories of analysis. At the risk of over-simplifying complex theories, we will mention three categories of analysis - the dynamic of history, the view of conflict, and the nature of social groups.

Liberal historians often emphasize continuities in the American experience, rather than the changes. In analyzing change, liberals usually advocate evolutionary, gradual change, and focus on changing people's ideas. Radicals see uneven rates of change existing in the natural and social world, and favor radical structural change as well as change in consciousness, revolutionary movement, as well as slower change.

While liberals and radicals both agree that conflict is continually present in society, liberals emphasize the need to control that conflict and to resolve it through debate, negotiation, and gradual reform. Hence, education, in this view, plays a central role in a society's ability to deal with change. Changes often outrun people's capacity to understand them, but through investigation and discussion, informed citizens can engage in rational discourse about change; through their participation in social organizations and democratic institutions they can mediate those changes.

For the radical revisionists, society is not so mysterious. Reality is multi-layered; at the surface ideology masks the structural reality of social class relationships expressed through political power and ownership of property. Conflict among rival groups or classes initiates change in society. A ruling class rules through the threat and use of force and violence, but also through the hegemony of an ideological concensus of values and beliefs, whose taken-for-granted quality makes them appear "natural."

Where liberals often focus on categories of the individual or plural social groups, radicals tend to use a social class, power elite, or oppressor-oppressed model. Radicals tend to stress a dialectical relationship between individual and social context, and try to integrate both in their analysis.

Throughout the 1960's and 1970's the revision of many debates in American history offered new perspectives on the "melting pot," on black history and women's history; on "history from the bottom up"; and democratic politics, for example, the conservative impact of liberal reform in the Progressive Era and the New Deal. These new interpretations began to influence the history of adult education, as historians of the field broadened both their viewpoint and the context in which they situated adult education.

The publication of Robert A. Carlson's The Quest for Conformity: Americanization Through Education (1975) signaled a new and critical attitude toward the social uses of adult education in American society. Carlson attacked the Americanization programs of the Progressive Era (c. 1880-1920) as intrusive efforts to impose a dominant culture that was "intellectually inconsistent with the U.S. ideal of a free society and unnecessary for national unity." (p. 15) However, he also went backward and forward in time to trace the same, persistent theme in American history and identified as Americanizers in an "imperious quest for conformity" leaders from John Winthrop, Cotton Mather, Benjamin Franklin, Noah Webster, Horace Mann, Thaddeus Stevens, Frances Kellor, to Booker T. Washington. (p. 11ff)

Carlson argued that not only was the content of adult schooling conformist and repressive, but that it was done in a nationalist mission that had turned the U.S. into an imperial power "Americanizing" the world.

> The contention of some that Americanization education has been a humanitarian means of creating a harmonious society will be judged in the context of the available options - immigration restriction, banishment, genocide, dependence on the environment alone, and cultural pluralism. (p. 15)

This interpretation suggested that there was, indeed, a large gap between the social uses of adult education and the professed ideology of adult educators; that educational institutions were intolerant and committed to an oppressive social control; and that education was often made to serve self-serving political and economic ends of institution builders and maintainers. In fact, Carlson was not alone, and further investigations into immigrant and minority points of view on the Americanization experience have followed.

Kathleen Rockhill (1976), as editor of the 25th anniversary and bicentennial issue of Adult Education, devoted to the history of adult education, was pessimistic about the past record of adult education having served anyone but the middle class.

> The challenge of breaking out of a primary role as training ground for the middle class and promoter of social advancement is before us. Can we break out of the roles ascribed to us by the influential public and pick up the mantle of the less influential carried byour predecessors? Hopefully, the continued study of our history will expand our vision of the possible and help us to see more clearly the limitations of the present reality. (p. 206)

Rockhill's own dissertation on the history of extension at UCLA raised issues of whom the university served - the people, elites, the professoriate? (Penfield, 1975). She critiqued Burton Clark's concept of the marginality of adult education and pointed out that adult education programs often play vital roles in system maintenance of major educational institutions, like the university or public schools. She concluded that the public service mission has never been a core

purpose of state universities, with the possible exception of the University of Wisconsin's extension program.

As American economic development in the past one hundred years has intensified conflict among workers, employers and the public, all three groups have contended over the proper forms that workers' education should take. Sue Davenport has chosen to broaden the context for study of workers' education to include social forces shaping the consciousness of workers, as well as labor union programs.

Workers, for example, have long engaged in informal political education through study groups, like the "workmen's circles" common among immigrant workers in the pre-WWI period. The organized labor movement has tended to use "nuts-and-bolts" training classes to build union leadership to blunt class-consciousness and militancy.

Management has historically contested workers' prerogatives and control over production and sought to counter the impact of unions through deliberate educational policies. For instance, using the theories of Taylor and others, management has deskilled complicated industrial production work into routine and monotonous jobs on the assembly line so that workers individually have little knowledge and control over the production process. This deskilling now describes the job situation of many nurses and teachers, and other professional jobs, where prescribed formulas and minute specialization leaves little room for individual judgment. In this way workers have been de-educated by management about their jobs and their working abilities.

The state has authored several major policies of adult education, including Americanization programs to teach immigrants conformity to dominant social values, the divorce of vocational and humanist education for working class children and adults, and the G.E.D. program.

Taken together, these education programs for workers suggest that adult education is very much a "contested terrain," one in which diverse social forces are in conflict over how best to appeal to the hearts and minds of workers, and for different ends.

In this symposium we will discuss how the radical revisionist perspective is helpful to analyzing these three particular historical problems. We will identify common ground that revisionist historians of education share and comment on the more recent shifts and divisions emerging among them. We will identify dominant trends in the historiography of adult education and examine the implications of the revisionist perspective for those trends. We will also discuss methodological implications of the revisionist approach, considering the relative importance of quantitative and qualitative methods, of official and popular sources in research, and the compatibility of phenomenology and participation research with the revsionist perspective. In conclusion, we will attempt to assessthe pro's and con's of that approach for continued research on the history of adult education.

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SYMPOSIUM

TITLE: APPLICATION OF MODERN TESTING THEORIES TO PROBLEMS IN ADULT EDUCATION

Presenters: Delwyn L. Harnisch,* Chair
University of Illinois,
Urbana-Champaign

Ronald M. Cervero
Northern Illinois University

Discussant: Phyllis M. Cunningham
Northern Illinois
University

INTRODUCTION

A basic problem in interpreting test scores is that their meaning and quality depends upon the specific set of items actually standardized and the ability distribution of the people who appear in the standardization sample. Thus, modern test theories have sought both ways of calibrating instruments that are independent of the sample used for calibration and ways of measuring persons that are independent of the specific set of items that were used for the measurement. Classical test theories involves calibrating test items based upon how many people in a sample succeed on the item (item easiness) and the correlation between item responses and test score (item quality) and measuring persons ability by their percentile standing in a sample. A new set of test theories and technologies, Item Response Theory (IRT), is now available which can provide more accurate and usable meanings from test information.

The same number-right score on a test can disguise the fact that an individuals' incorrect answers may yield important information about individual preparation. The meaning of an individual's test score depends on the validity of the test performance, on the absence of cheating and guessing, and on the individual paying attention, reading carefully, and trying to do well. If that person's performance benefits from special help, guessing or copying, then the score may exaggerate his or her knowledge. If the person is ill, confused or careless, or the test is culturally inappropriate, then the score may underestimate the person's ability. Such real possibilities endanger the meaning of a person's test score. The validity of an individual test score can be examined before assuming the test score reflects the person's knowledge. One approach to assessing the ability of an individual's test score is through the use of person fit statistics based on the Student Problem (S-P) Curve Theory.

The symposium will outline two new approaches, IRT and S-P Curve Theory, and present an application of each approach with data collected from a national sample (N=1537) of American adults using the Adult Performance Level Test. This test, which is designed to measure adult functional literacy, is composed of four skill areas (reading, computation, writing, and problem solving) and five content areas (occupational knowledge, consumer economics, health, community resources, and government and law).

ITEM RESPONSE THEORY

The classical test model and many closely related item statistics have several important limitations. First, the percentage of correct responses and the item score-total test score coefficients of correlation vary as a function of the ability distribution found in the particular sample of individuals for which they are computed. This limitation of sample dependent

*Office of Educational Testing, Research and Service, 123 Institute for Child Behavior and Development, 51 Gerty Drive, Champaign, IL 61820.

statistics is a serious handicap for test developers. Second, the total test score for an individual depends upon the particular selection of items included in the test. Comparisons among individuals are limited to situations where examinees have been administered identical or "parallel" sets of test items. Third, the variance of errors of measurement is assumed to be the same for all examinees. From observation, it is not uncommon to see that some people perform a task more consistently than others and also that consistency varies with ability. Thus, what is needed are test models which provide information about the precision of a test score (ability estimate) that is specific to and is free to vary from one test score (ability estimate) to another. The shortcomings of the classical test model have given rise to the development of a more appropriate test model, commonly referred to as Item Response Theory (IRT) (Lord, 1980).

IRT is also sometimes referred to as Latent Trait Theory or Item Characteristic Curve Theory. The test model for the IRT supposes that an examinee's performance on a test can be predicted in terms of one or more characteristics referred to as traits (Lord & Novick, 1968). Traits are not observable directly but rather are estimated from individual performance on a set of test items. The latent trait model specifies a relationship between the observable individual test performance and the unobservable traits assumed to underlie on individual's performance on a test. Thus, a mathematical function describes the relationship between the observable and unobservable quantities.

The latent trait models are based on three assumptions about the test data. First, the assumption that a set of test items is unidimensional, only one ability is necessary to "explain" or "account" for examinee test performance, allows for scores on tests that measure only one trait to be interpreted relatively easy. Second, the responses to the test items are statistically independent, commonly referred to as local independence. Third, the test is not speeded. That is, persons who fail to answer test items do so because of limited ability and not because they failed to read the test items.

One of the great appeals of IRT models is the possibility that they can provide invariant item parameters. That is, in the words of Wright (1977), "person-free item calibration." If an IRT model holds, then once the estimated parameters have been put on the same scale, the item parameter estimates obtained separately for two different groups should be the same, except for sampling error.

RESULTS AND DISCUSSION OF ITEM BIAS STUDY

It is often argued that certain type of items are biased against some groups. Of particular concern in the first study is the possibility that non-essential characteristics of particular test items may result in misleadingly poor performance for groups formed on the basis of race or sex. The early research efforts have not been overly successful in identifying general characteristics of test itmes that result in the underestimation of the competence of particular groups of learners since the early studies relied on sample dependent item statistics. However, IRT provides a more theoretically sound approach to the problem fo identifying items that function differently for different groups. (See Rudner, Getson and Knight, 1980 for a review of several approaches to the detection of item bias.)

Following the approach outlined by Linn and Harnisch (1981) we first obtained estimates, using LOGIST (Wood, Wingersky, & Lord, 1976), of the item

discrimination power, a, the item difficulty, b, and the lower asymptote, c, of the three-parameter logistic model based upon all available cases (N=1537) in the national sample of 67 items. This also provided an estimate of each person's location along the latent trait, θ. These results were used to obtain estimates of the expected chance that each person would have of getting each item right. These estimates were compared to the observed results separately for white and for black persons. The comparisons for the 153 black persons in the sample were made as a function of estimated values of θ. First, the black students were divided into quintiles on the basis of their estimated θ's. Within each qunitile, expected performance, observed performance and average standardized difference scores were computed for each item.

The expected and observed proportion correct for the five quintiles of two items are shown in Figures 1 and 2. The observed and expected proportions are plotted above the mean θ value within each quintile. The solid lines connect the expected proportions and the dashed lines connect the observed proportion. The item shown in Figure 1 has the largest positive standardized difference score averaged over all quintiles while the item shown in Figure 2 has the largest negative standardized difference score averaged over all quintiles.

Relative to other items on the test, the item in Figure 1 may be considered biased in favor of black students because their actual performance is systematically better than expected. The item in Figure 2, on the other hand, may be considered biased against black students relative to other items on the test.

The results in Figures 1 and 2 represent the extremes. For these items, however, the differences are fairly substantial. The performance of black students would appear better on a test that had more items of the type shown in Figure 1 and/or few items of the type shown in Figure 2. These results, however, do not, of themselves, indicate the cause of these differences. We have attempted to find clues as to the possible reasons for these differences in two ways. First, we simply compared the content and skill area of the items with most extreme positive differences with those with the most extreme negative differences. Second, we categorized items into skill and content areas and compared the items in terms of their average standardized difference scores.

Of the five items with the largest negative standardized differences, four of them involved questions about consumer economics or community resources while the other item involved a problem-solving skill in health. The item shown in Figure 2 involved a question about reading a road map of Nebraska. The question reads: "Mr. King wants to go from Wood Lake to Brewster. He is a stranger to Nebraska and he wants to take the most direct route. Name the town where he has to change from one highway to another."

Of the four items with the largest positive standardized difference, two of them were story problems involving money while the other two items dealt with writing a return address on an envelope and signing a complaint form. The item represented in Figure 1 involved the follow question: "Manuel makes $2.00 an hour and works a 20-hour week. He is paid time and a half for overtime. How much would he earn if he worked 43 hours one week?"

The identification of items that function differently for different groups is only an important first step. It leaves unanswered the more interesting question of why. The understanding of these interactions between

learner characteristics and the characteristics of items used to measure functional literacy will contribute to the development of improved measurement procedures in adult education.

STUDENT-PROBLEM CURVE THEORY

Indices based on the degree to which an individual's pattern of right and wrong answers contain important diagnostic information. (See Harnisch and Linn, 1981 for a review of the indices based on S-P Curve Theory.) To understand the nature of these indices, it is convenient to start with a matrix of zeros (incorrect responses) and ones (correct responses). A row of the matrix is associated with each person and a column with each item. Rows and columns of the data matrix are permuted so that the items (columns) are arranged from left to right in ascending order of difficulty, and persons (rows) are arranged from top to bottom in descending order of total number of correct answers. The resulting matrix has been called a Student-Problem by Sato (1975).

A small hypothetical example of an S-P Table with 18 persons and 5 items is shown in Table 1. The solid and dashed lines in Table 1 are known as the S-curve and P-Curve, respectively. The S-curve (solid line) is obtained by drawing a vertical line for each row that has $n_{i.}$ items (columns) to the left of it, where $n_{i.}$ is the total number of correct responses for the ith person. The P-curve (dashed line) is obtained by drawing a horizontal line in each column such that there are $n_{.j}$ persons who answer item j incorrectly.

A homogeneous response pattern would have the S- and P-curves coinciding. The degree of divergence between the curves provides an indication of the degree of heterogenity of the response patterns. Sato (1975) has developed a caution index which indicates the unusualness of a response pattern. A large value on this index indicates that some caution may be needed in interpreting a total correct score for a person. Harnisch and Linn (1981) introduced a modified caution index which has a lower bound of 0 and an upper bound of 1. (See Harnisch and Linn, 1981 for computational formulas.)

RESULTS AND DISCUSSION OF THE STUDY OF ITEM RESPONSE PATTERNS

Test results from the Adult Performance Level Study were used to examine the relationship of background characteristics with the modified caution index computed over the 67 items on the test. Modified caution indices were also computed for each of the 1537 adults over the four skill areas of reading, writing, problem solving, and computation.

A summary of the F-values resulting from the analyses of variance for the modified caution indices by race and sex are given in Table 2 along with the means and standard deviations. Significant sex and race differences were found on the modified caution index computed for the total set of items. Significant sex differences were also found on modified caution indices computed over the reading and the problem-solving skill areas. Race differences were found on the modified caution indices on only the writing items. No significant race by sex interactions were found.

Females, in general, had lower caution values than males which is consistent with earlier research efforts (Harnisch & Linn, 1982). Differences similar to those reported above indicate at the first level the type of items that

function differently for various subgroups. These differences may have greater diagnostic value than total scores. There may be a variety of reasons for subgroups to have substantially different response patterns.

The educational importance of this research is that the modified caution index can be used to identify adults for whom the standard interpretation of the total test score is misleading, or identify groups with atypical instructional and/or experiential histories that alter the relative difficulty ordering of the items. In addition, the items that contribute most to high values on a modified caution index for particular subgroups are identified and judgments could be made regarding the appropriateness of the item content for these subgroups.

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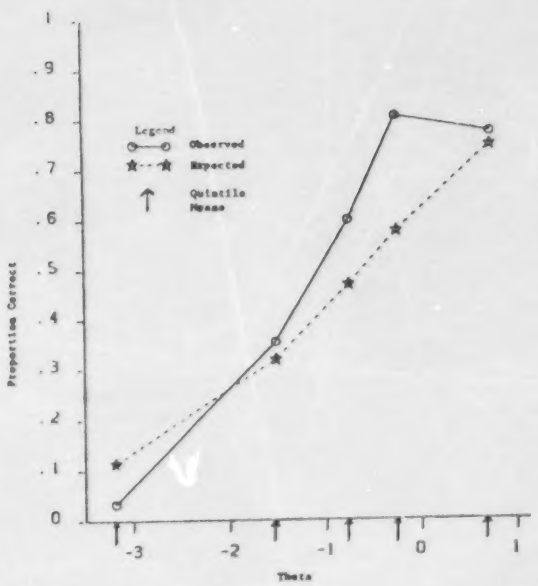

Figure 1. Observed and expected proportion correct as a function of theta on an item with a large positive difference.

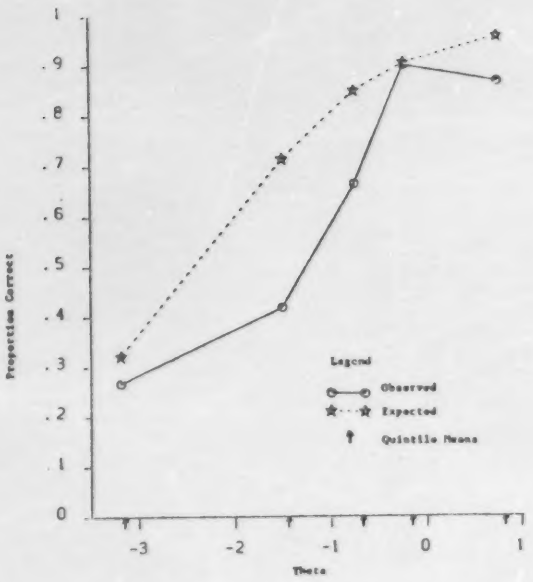

Figure 2. Observed and expected proportion correct as a function of theta on an item with a large negative difference.

Table 1

B-P Table for 18 Examinees and 5 Items

(Hypothetical Example)

Examinee i	Item j 1	2	3	4	5	Examinee Total $n_{i\cdot}$	Sato's Caution Index C_i	Modified Caution Index C_i^*
1	1	1	1	1	0	4	.00	.00
2	1	1	1	0	1	4	.65	.33
3	1	1	1	0	0	3	.00	.00
4	1	1	0	1	0	3	.16	.08
5	1	1	0	0	1	3	.65	.33
6	1	0	1	0	1	3	1.13	.56
7	1	1	0	0	0	2	.00	.00
8	1	1	0	0	0	2	.00	.00
9	1	0	1	0	0	2	.54	.27
10	1	0	0	1	0	2	.59	.31
11	0	1	1	0	0	2	.74	.39
12	0	1	0	1	0	2	.88	.47
13	1	0	0	0	0	1	.00	.00
14	1	0	0	0	0	1	.00	.00
15	0	1	0	0	0	1	.45	.22
16	0	0	1	0	0	1	1.15	.56
17	0	0	0	1	0	1	1.36	.67
18	0	0	0	1	0	1	1.36	.67
Item Total $n_{\cdot j}$	12	10	7	6	3			
Sato's Caution Index C_j	.30	.20	.42	.93	.21			
Modified Caution Index C_j^*	.14	.14	.21	.50	.13			

Table 2

Summary of Univariate F-Ratios for Analysis of Variance, Means and Standard Deviations on Five Modified Caution Indices for Groups Formed Based on Sex and Race

Category	Number of Items	Univariate F	Sex: Males Mean	Males S.D.	Sex: Females Mean	Females S.D.	Race: Univariate F	Race: White Mean	White S.D.	Race: Black Mean	Black S.D.
Total	87	47.09*	.31	.16	.26	.14	14.06*	.29	.15	.24	.11
Reading	16	9.36*	.31	.20	.27	.20	.20	.29	.21	.28	.19
Problem Solving	21	7.83*	.37	.21	.33	.20	1.37	.35	.21	.32	.19
Computation	13	3.19	.30	.24	.27	.24	.33	.28	.24	.27	.21
Writing	19	.93	.27	.22	.25	.22	10.70*	.26	.22	.19	.19

*p < .01

SYMPOSIUM

COMMUNITY ADULT EDUCATION: A REVIEW OF PRINCIPLES, PRACTICE, AND PHILOSOPHY

Dr. Stephen Brookfield, Research Officer, Advisory Council for Adult and Continuing Education, 7 Danvers Road, Broughton, Banbury, Oxfordshire OX15 5D4, U.K.

Dr. Roger Hiemstra (Symposium Chair), 230 Huntington Hall, Syracuse University, Syracuse, NY 13210

Dr. Connie Leean, Consultant, R.D. 2, Box 317, Williston, VT 15495

Dr. Joan Wright, Dept. of Adult and Community College Education, North Carolina State University, Box 5504, Raleigh, NC 27607

INTRODUCTION

Professionals in adult education need to understand the theoretical and proven from practice techniques or knowledge necessary for the effective management of community based learning activities. Considerable theory, research, and technology related to community adult education are available. Thus, the purpose of this symposium is to provide participants the opportunity to evaluate their own skills and knowledge in relation to working at the community level with adult learners.

The objectives of the symposium are as follows:

1. To provide a conceptual overview of community adult education.
2. To describe the various community settings for adult learning outside of formal adult education classes.
3. To describe one attempt to teach at the graduate level skills and knowledge related to community adult education.
4. To describe a naturalistic inquiry of adult learning at the community level.

It is anticipated that the symposium will result in several participants rethinking their research, instructional, and consulting endeavors related to adult learning at the community level. This is important because of increasing need for and interest in adult learning via various non-traditional settings. Hopefully, some insight into the changing roles of institutions and educators trained for professional adult education will result. The following background papers present information relative to the four symposium objectives.

COMMUNITY ADULT EDUCATION: A CONCEPTUAL ANALYSIS

Stephen Brookfield

Adult educators who wish to assert their pedigree as impeccable humanists have access to a litany of venerated terms and concepts. To say that one is "meeting clientele needs," providing for the "disadvantaged" or engaging in "community" adult eduction, is to declare one's credentials as a concerned, responsive and responsible professional. These phrases have a high level of use but a low level of meaning. They also mix descriptive and prescriptive elements, so that to talk of promoting community adult education is to assert something that is desirable in itself as well as being descriptive of

practice.

The semantic and conceptual ambiguity surrounding the term community adult education is heightened by the fact that "community" is a word of considerable emotional power to adult educators. As one British writer has commented, it is "one of those terms which are uttered with solemnity and as soon as they are pronounced an expression of respect is visible on every countenance and all heads bowed" (Dennis, 1968, p.74). The term has become synonymous with virtue and desirability and those who challenge the validity of its usage run the risk of being branded as cynical or heretical. The reverence accorded this concept can block any considered analysis of its central features. As a result, those definitions which are offered tend to view communities as organic, harmonious entities. They imply a mutuality and interrelatedness, a neighbourhood awareness of obligation, and a subscription to shared social norms, which may well be empirically unobservable.

Because of its empirical inaccuracy, the neighbourhood, locational definition of community adopted by the Commission of Professors some 20 years ago (Hallenbeck, 1962) has fallen into disfavour. It has become acceptable to talk of communities of interest (philatelists) and communities of function (social workers). In a recent AEA Handbook, Wright declares that "a community is a collectivity of people differentiated from the total population by a common interest" and that she is interested in "the community of common interests, which supersedes other connections including that of geographical location." (Wright, 1980, p. 101)

This paper presents two propositions. Firstly, that operational factors mean that the neighbourhood definition of community is still of crucial importance to adult education. Programs are, after all, located within a clear geographical locale and are often funded from sources within that locale. Participants in programs will come from the area surrounding the providing agency and programs must, therefore, bear some relation to the interests, concerns and felt needs of participating individuals. Secondly, that the ambiguity surrounding the concept of community adult education might be reduced by focussing on the community practice or community context of adult education. Thus, adult education programs can exhibit a greater or lesser awareness of the structures and concerns of the community in which they are located. A typology of adult education practice is proposed, therefore, in which three dimensions of the community practice of adult education are identified: Adult education for the community, adult education in the community, and adult education of the community.

It can be argued that words like "democracy" and "community," in which prescriptive and descriptive elements are mixed, are inspirational words behind which people can rally. The attempt to define these words can be inversely related to their power to inspire devotees. However, unless we recognise the value base underlying this concept, we will fail to realise that adult educators working in this context are faced with the need to make value choices in their practice. Definitions such as those offered in a recent delphi study of professors of adult and community education pose unanswered questions of great importance - "the process of identification of community needs and the marshalling of resources to meet those needs so that the community and its members can grow through social and educational programs" (Fellenz & Coker, 1980, p. 319). Who is to decide what are community needs? Are they equivalent to the sum total of individual felt needs, or do they arise out of the educator's

prescription of the programs and changes felt that a community requires? What if in the attempt to foster the growth of the community and its members, the educator is required to sponsor contradictory programs. Fostering the growth of a conservationist group may be in direct opposition to fostering the growth of property developers. It is in the attempt to expose the ubiquitous nature of such unanswered questions, hidden assumptions, and covert value judgements in discussions of community adult education that these few comments are offered.

References:

Dennis, N. Popularity of the neighbourhood community idea. In R.A. Pahl (Ed.), Readings in Urban Sociology, Oxford: Pergamon Press, 1968.

Fellenz, R. A. & Coker, L. W. Toward a definition of adult education, community education and community development. In Yearbook of adult and continuing education, Chicago: Marquis Academic Media, 1980.

Hallenbeck, W. C. Community and adult education, Washington, D. C.: Adult Education Association of the USA, 1962.

Wright, J. Community learning: A frontier for adult education. In Boyd, R. D., Apps, J. W., and Associates, Redefining the discipline of adult education, San Francisco: Jossey-Bass, 1980.

COMMUNITY LEARNING

Joan Wright

Boyd and Apps (1980) use three dimensions to describe every instance of adult education. These are "transactional mode"--whether the learners are working individually, in groups, or as members of a community; "client focus"--whether the individual, group, or community is the primary beneficiary of the learning transaction; and "system"--whether the educational transaction is affected mainly by characteristics of the individual, society, or culture in which it is situated. In their book, I argued that community learning occurs when the focus of learning is the community and when the learning transaction requires participants to assume their community roles. This community focus and community mode cell in the Boyd-Apps matrix is most influenced, I believe, by the social system, particularly the rules by which decisions are made within a given community.

Within this cell the professional adult educator could appropriately perform several roles. One would be that of consultant in regard to the adult education skills that Hiemstra describes in his symposium paper, to community officials and groups who initiate and-or are responsible for community activities that necessarily involve learning. For example, an adult educator might work with a government agency in designing the public participation program which the agency is required to conduct as part of a special project or its ongoing business. As another example, the adult educator might assist a United Way Board of Directors to invent a process by which agency budget proposals could more clearly and widely be promulgated, negotiated, and understood in the community. Working with a public works department to plan how best to instruct residents of a neighborhood facing major utilities construction to cope and cooperate with the necessary

upheavals is another possibility. In each of these situations the community (rather than a single individual or group) is the intended beneficiary, and the mode necessarily involves people in their roles vis-a-vis that community.

There is another role that the professional adult educator not only can play in community learning, but should take on even more (and more seriously) if adult education is to survive and flourish. That role is not a bystander or advisory one, but one as fully engaged interest group participant. The interest group, obviously, is adult education, including the practitioners, providers, professors, and participants thereof. One example of such interest group participation is in building bigger and better adult education organizations. By organizing more advocates of adult education under a common banner (or bylaws), greater community awareness of adult education is created, and more members of the general public learn to identify themselves as affiliates of adult education (and, hopefully, card-carrying members). A second example, equally familiar, occurs when the adult educator assumes the lobbyist's or promoter's garb and argues in whatever arenas are appropriate for community support of adult education. Writing to elected representatives in state or federal legislature, testifying before a government body, informally explaining to influencers of public decisions the goods to be derived from adult education--these are instances of promoting this special interest. A third example is found in our evaluative activities regarding adult education. By raising questions, gathering information, involving people, and presenting results, we are shaping the values that various publics hold in regard to adult education, creating stakeholders in adult education, and informing stakeholders of the extent to which their values are expressed in current forms of adult education.

Focus on this "community learning" cell in the Boyd-Apps matrix does not exclude the possibility (and the desirability) that individuals and groups will also benefit from the learning transaction. Community roles are necessarily performed by individuals, but individuals may direct their learning to their roles as individuals and members of groups as well as to their roles in the community. Less fully appreciated, perhaps, is the opportunity for adult educators to see and seize involvement in community learning, or, as Brookfield notes in his conceptual analysis statement, _for_, _in_, and _of_ the community.

Reference:

Boyd, R. D., Apps, J. W., and Associates. _Redefining the discipline of adult education_, San Francisco: Jossey-Bass, 1980.

TEACHING COMMUNITY ADULT EDUCATION SKILLS AND KNOWLEDGE

Roger Hiemstra

The skills required of adult educators to work with adult learning in the community setting are diverse. A variety of roles are possible, magnifying the diversity issue. Helping to conceptualize the meaning of community, assisting in the defining of community needs, serving as a consultant to various types of community agencies, being an advocate on some community issue, and even carrying out necessary research at the community level (as Leean describes in her symposium paper) are some of the roles.

Those working in such roles, therefore, must understand how to analyze a community and its people, how to assess a community's needs, how to identify and mobilize community resources, and how to facilitate the investment of time, money, or human resources in such a manner as to maximize their return. Today's rapid and constant rate of inflation and social change make such effectiveness imperative. Thus, the purpose of this paper is to provide information on the suggested skills necessary in dealing with the community and its educational problems.

One of the graduate courses taught and one of the non-credit staff development workshops conducted by the author periodically is entitled, "Community and the Adult Educator." The assumption upon which both the course and the workshop are based is that any adult education professional desiring success at the community level must have certain skills. Thus, at the completion of an integrated learning experience on this topic, a participant should be able to perform in at least the following ways:

1. Can construct a personal planning model or series of planning steps for utilization in subsequent planning efforts.
2. Can identify the primary indices available for studying a community.
3. Can develop an approach for studying a community and its potential educational resources.
4. Can analyze a community for its strengths and weaknesses.
5. Can complete a power structure analysis of a community and identify the primary power actors.

To obtain the competencies listed above, class or workshop members participate in a variety of learning experiences. For example, in the graduate level course students are expected to complete both a power structure analysis within and an extensive study of a real community. The workshop participants receive some similar exposure by working with a community based gaming and simulation device and through the examination of some case study material. The final product is an understanding of a particular community to such a degree that educational decisions can be made in harmony with needs, existing talents, and available resources. (For more related information see Hiemstra, 1980.)

A comprehensive understanding of a community, no matter how it is defined, takes considerable study effort. However, the payoff for all this effort is the ability to design educational programs that both "fit" and make use of a wide range of potential resources. Such an ability will be all the more imperative in the return of political control and responsibility to the local arena in the new "federalism" of the 1980's.

Reference:

Hiemstra, R. Adult and community education: Mobilizing the resources of the city. In Spikes, W. F. (Ed.), The university and the inner city, a redifinition of relationships, Lexington, MA: D. C. Heath and Company, 1980.

NATURALISTIC RESEARCH OF ADULT LEARNING IN A COMMUNITY CONTEXT

Constance Leean, Educational Consultant*

Using a recently completed NIE adult learning research study on self-directed adult learning, this presentation will focus on three aspects of naturalistic research which are particularly appropriate to community-based studies.

First, a "naturalistic design" was constructed from an attempt to be responsive to the language, concepts and contexts of the respondents - adult learners in rural Vermont communities. Included in the design stage were: (1) field trips to the communities involved; (2) the construction of a conceptual framework that would assure wholistic approaches to adult learning; (3) the selection of techniques for engaging the respondents as research partners; and (4) a structure for continuous reassessment of the form and substance of the research-in-progress.

A second aspect of this research, "naturalistic analysis" proceeded through several stages. The first stage was a portrayal of the data from the respondent's point of view. This involved the writing of case studies which summarized over fourteen hours of interactions with each of fourteen adult learners. Care was taken to expunge from these summaries any remarks or judgments by the researchers. Another stage of analysis involved examining the case study summaries for common themes which emerged from the reported learning experiences of the adult learners. Later, these themes were clustered in broader conceptual and theoretical categories. Moving from the particular to the general and the personal to the social without losing the richness and purity of the individual responses was the foremost challenge of this analysis effort.

Finally, "naturalistic generalization" was attempted. Stake (1980) and Hamilton (1979) have discussed shifting the burden of validity and generalizability from the researcher to the "users", or recipients, of naturalistic research. Testing this concept, the NIE researchers approached several "user" groups with the data and analysis, requesting their judgments concerning the validity of the analysis. Also, people were asked if the findings matched their personal and professional knowledge of the phenomena studied. These groups included the fourteen respondents (who individually checked the accuracy of the case study summaries), a group of consultants, adult and continuing education practitioners, and federal policy makers. Among the many interesting things learned from this process was the importance of providing "thick description" or information relative to the respondents and their contexts as well as detailed accounts of the interactive methods used with the respondents. This reinforces the claim made by Stake and others that a prerequisite for users to be able to judge the validity and generalizability of research is the availability of detailed context descriptions which they can compare to their own settings.

Experiencing the process involved in doing naturalistic research of adult learning in a community setting confirmed to the researchers the importance of using a complex methodological framework in understanding a complex phenomena - how self-directed learning happens within a community environment.

*R.D. 2, Box 317, Williston, VT 05495

USING ERIC IN ADULT EDUCATION RESEARCH

Susan Imel
Ohio State University

Do you think of ERIC when you are involved in a research project? If not, you may be overlooking an important resource, one that can be of assistance to your research efforts in adult education. Because of the nature of the field of adult education, much of its literature can be categorized as fugitive; it is not widely available through regular channels such as commercial publishers. Since the ERIC database serves as a repository for educational materials of a fugitive nature, it is an important source of adult education documents. It is quite simple to gain access to the ERIC database; the information below describes how to use ERIC so that you can obtain information it may contain in your research area.

What is ERIC

Educational Resources Information Center - ERIC - is a nationwide information system in existence since 1966 and currently supported by the National Institute of Education. Designed to put the results of educational research and development in the hands of researchers, practitioners, and other interested individuals, ERIC consists of a central unit in Washington, D.C. and sixteen clearinghouses located throughout the country, each focusing on a specific field of education.

The clearinghouses are responsible for acquiring, selecting, abstracting, and indexing materials in their assigned scope areas while the central unit maintains the database and prepares the monthly journal of abstracts, Resources in Education (RIE), using material submitted by the clearinghouses. A second monthly index, Current Index to Journals in Education (CIJE), is also prepared for the ERIC system by a commercial publisher. To date more than 200,000 documents have been abstracted and announced in RIE and annotations of more than 250,000 journal articles have appeared in CIJE. Together, these entries form the ERIC database that can be used by researchers to locate information.

In addition to building the database, the clearinghouses also develop printed materials for their assigned scope areas as well as answer questions and/or respond to requests for information. The ERIC Clearinghouse on Adult, Career, and Vocational Education (ERIC/ACVE) has the major responsibility for servicing the field of adult education, but three other clearinghouses also serve scope areas that are concerned with adults and their needs. These are the ERIC Clearinghouse on Counseling and Personnel Services, the ERIC Clearinghouse on Higher Education, and the ERIC Clearinghouse for Junior Colleges. If you wish to contact these clearinghouses with specific requests or to be placed on their mailing list, their addresses are included at the end.

Susan Imel, Assistant Director and Adult Education Specialist, ERIC Clearinghouse on Adult, Career, and Vocational Education, Ohio State University, 1960 Kenny Road, Columbus, OH 43210; 800/848-4815.

ERIC Reference Tools

In order to locate information in the ERIC database, it is important to be familiar with the monthly indexes Resources in Education (RIE) and Current Index to Journals in Education (CIJE) as well as the Thesaurus of ERIC Descriptors.

The Thesaurus of ERIC Descriptors is a controlled vocabulary of educational terms called descriptors. Desciptors are used to index and enter documents into the ERIC system and to assist users in retrieving information from it. With the help of the Thesaurus, all materials processed by ERIC can be identified by manual searches of the printed indexes of RIE and CIJE or by computer searches of the ERIC tapes.

Resources in Education (RIE) is a monthly publication of abstracts of the nearly 1,200 documents that pass the ERIC selection criteria at the clearinghouses. Recently completed research reports, curriculum and teaching guides, instructional materials, descriptions and evaluations of exemplary programs, and other documents of educational significance are examples of the types of adult education materials that are announced in RIE. Documents that appear in RIE are indexed by subject, author, institutional source, and publication type. Most of the documents are available on microfiche or in print form for a small charge.

Current Index to Journals in Education, another monthly publication, contains annotations of articles from more than 700 major education-related journals. In addition to a main entry section listing the annotations, CIJE is indexed by subject, author and journal title. Because of copyright laws, the articles are not available on microfiche through ERIC, but CIJE directs users to reprint sources.

Two additional reference tools are directories giving information on ERIC collections and services. More than 700 libraries throughout the country house ERIC collections; they have copies of RIE, CIJE, and microfiche of more than 160,000 of the documents announced in RIE. The Directory of ERIC Microfiche Collections is a listing of the organizations with sizable ERIC microfiche collections organized alphabetically by state and by cities within each state. The Directory of ERIC Search Services lists and describes briefly the more than 500 organizations currently providing computerized searches of the ERIC database. It, too, is organized alphabetically by state and city and includes search cost information. Single copies of these directories may be obtained free of charge by writing of calling the ERIC Processing and Reference Facility, ORI, Inc., Information Systems Division, 4833 Rugby Avenue, Suite 303, Bethesda, Maryland 20814; (301) 656-9723.

Searching ERIC

When preparing to do a search of the ERIC database, either by hand or by computer, it is important to determine exactly what you want. Try to be as specific as possible. Using the ERIC Thesaurus, it is necessary to translate the main concepts of your topic into descriptors.

If, for example, your topic is "Adult Learning Disabilities," there are two concepts: (1) adults; and (2) learning disabilities. The proper descriptors to be selected from the Thesaurus for the search for each of these concepts are:

Concept: Adults	Concept: Learning Disabilities
(1) adults	(1) learning disabilities
(2) adult basic education	(2) remedial reading
(3) adult students	(3) learning problems
(4) adult education	(4) educational diagnosis

Figure 1 is a page of the ERIC Thesaurus that contains the descriptors for the concept adult. Each descriptor entry contains the following information: (1) the date the descriptor came into use in the ERIC system; (2) the number of times each descriptor has been used to index materials for CIJE and RIE; (3) a scope note (SN) defining how the term is used in ERIC; (4) what other terms the desciptor is used for (UF) or instead of; and (5) broader terms (BT) and related terms (RT) that are other ERIC descriptors to be considered in conducting the search.

Referring to the descriptor Adult Education shown in Figure 1, the following information can be determined about the term. It came into use as a descriptor in July, 1966 and has been used in indexing 3,367 journal articles in CIJE and 5,108 documents in RIE. The scope note (SN) is "providing or coordinating purposeful learning activities for adults." It is used for (UF) or instead of the terms Adult Education Programs and Further Education. (That means that neither of these terms is used as a descriptor in ERIC so information relating to these concepts will be indexed with the descriptor Adult Education.) There are eight narrower terms (NT), one broader term (BT), and twenty-five related terms (RT) listed. Depending upon the objectives of the search, some of these terms may need to be considered for use in conducting it.

Manual Searching

Locating information in ERIC using the printed indexes, CIJE and RIE, is referred to as manual or hand searching. In conducting a hand search, select one of the descriptors to start your search. In the case of the example, "Adult Learning Disabilities," the descriptor learning disabilities is the best place to start. Look up "learning disabilities" in the subject index of both RIE and CIJE and select those entries that are most relevant. (RIE uses ED numbers to list entries and CIJE uses EJ numbers to list journal entries.) Once you have ED or EJ numbers, you can look up the abstract or annotation in the main entry section of the index to determine if you wish to acquire the entire document or article. Repeat this process with all descriptors to locate relevant information. Figure 2 shows sample entries from RIE and CIJE.

Computer Searching

Searching the ERIC database by computer is much more efficient than searching it manually, provided you have selected the proper descriptors. All the descriptors you select can be entered at the terminal at once. Through a crossing technique based on Boolean logic principles, a search is performed of the entire database in seconds. A trained searcher will conduct the search

ADULT BASIC EDUCATION *Jul. 1966*
CIJE: 383 RIE: 1,356
SN Education provided for adults at the elementary level (through grade 8), usually with emphasis on communicative, computational, and social skills (note: also appears in the list of mandatory educational level descriptors)
UF Fundamental Education (Adults)
BT Adult Education
Elementary Education
RT Adult Reading Programs
Basic Skills
Functional Literacy
High School Equivalency Programs
Literacy Education
Migrant Adult Education
Primary Education
Public School Adult Education

Adult Characteristics (1967 1980)
USE ADULTS

ADULT COUNSELING *Jul. 1966*
CIJE: 150 RIE: 211
BT Counseling
RT Adult Dropouts
Adult Programs
Adults
Career Counseling
Counselors

ADULT DAY CARE *Mar. 1978*
CIJE: 6 RIE: 2
SN Care of disabled adults (handicapped, elderly, and those who are ill) during the day, in which health and social services are offered by professional and paraprofessional staff
BT Social Services
RT Adult Programs
Adults
Attendants
Day Care
Home Health Aides
Older Adults
Visiting Homemakers

ADULT DEVELOPMENT *Jul. 1966*
CIJE: 186 RIE: 209
SN Physiological, psychological, and sociological growth or maturation occurring throughout an adult's lifetime
BT Individual Development
RT Adult Education
Adult Learning
Adults
Developmental Stages
Developmental Tasks
Educational Gerontology
Gerontology

ADULT DROPOUTS *Jul. 1966*
CIJE: 26 RIE: 105
SN Adults who withdraw from an activity before its completion
BT Adults
Dropouts
RT Adult Counseling
Adult Education

ADULT EDUCATION *Jul. 1966*
CIJE: 3,367 RIE: 5,108
SN Providing or coordinating purposeful learning activities for adults
UF Adult Education Programs (1966 1980) #
Further Education
NT Adult Basic Education
Adult Vocational Education
Continuing Education
Labor Education
Migrant Adult Education
Parent Education
Public School Adult Education
Veterans Education
BT Education
RT Adult Development
Adult Dropouts
Adult Learning
Adult Programs
Adult Reading Programs
Adults
Adult Students
Community Education
Continuing Education Centers
Continuing Education Units
Correctional Education
Educational Gerontology
Extension Education
High School Equivalency Programs
Lifelong Learning
Noncredit Courses
Nonschool Educational Programs
Postsecondary Education
Professional Continuing Education
Professional Education
Refresher Courses
Retraining
Special Degree Programs
Training Allowances
Womens Education

Adult Education Programs (1966 1980)
USE ADULT EDUCATION; ADULT PROGRAMS

ADULT EDUCATORS *Jul. 1966*
CIJE: 222 RIE: 444
SN Teachers who specialize in adult education
BT Teachers
RT Extension Agents
Instructor Coordinators
Trainers

ADULT FARMER EDUCATION *Jul. 1966*
CIJE: 95 RIE: 120
SN Vocational education in agriculture for adults aged 25 or over engaged in production agriculture (note: for younger adults, use "young farmer education")
BT Adult Vocational Education
Agricultural Education
RT Farmers
Farm Visits
Rural Education
Rural Extension
Young Farmer Education

Adult Leaders (1967 1980)
USE LEADERS

ADULT LEARNING *Jul. 1966*
CIJE: 282 RIE: 495
BT Learning
RT Adult Development
Adult Education
Adult Programs
Adults
Adult Students
Lifelong Learning

ADULT LITERACY (1970 1980) *Mar. 1980*
CIJE: 207 RIE: 239
SN Invalid descriptor -- use "literacy," "functional literacy," or "illiteracy" with appropriate "adult" descriptor(s), e.g., "adult basic education," "adults," etc.

ADULT PROGRAMS *Jul. 1966*
CIJE: 650 RIE: 1,206
SN Programs for adults (note: also use a mandatory age-level or educational level descriptor)
UF Adult Education Programs (1966 1980) #
NT Adult Reading Programs
High School Equivalency Programs
BT Programs
RT Adult Counseling
Adult Day Care
Adult Education
Adult Learning
Adults
Alumni Education
Evening Programs

ADULT READING PROGRAMS *Jul. 1966*
CIJE: 68 RIE: 224
BT Adult Programs
Reading Programs
RT Adult Basic Education
Adult Education
Correctional Education
Functional Literacy
Functional Reading
High School Equivalency Programs
Literacy Education
Reading Instruction
Speed Reading

Adult Runaways
USE RUNAWAYS

ADULTS *Jul. 1966*
CIJE: 1,469 RIE: 1,531
SN Aged 18 years and over (note: also appears in the list of mandatory age-level descriptors)
UF Adult Characteristics (1967 1980) #
NT Adult Dropouts
Adult Students
Middle Aged Adults
Older Adults
Young Adults
BT Age Groups
RT Adult Counseling
Adult Day Care
Adult Development
Adult Education
Adult Learning
Adult Programs
Parents

ADULT STUDENTS *Jul. 1966*
CIJE: 515 RIE: 803
BT Adults
Students
RT Adult Education
Adult Learning
Continuing Education
Evening Students
Married Students
Nontraditional Students
Self Supporting Students
Single Students
Special Degree Programs

ADULT VOCATIONAL EDUCATION *Jul. 1966*
CIJE: 201 RIE: 727
SN Education for adults or out-of-school youth aged 16 or over engaged in or preparing to enter an occupation
Adult Farmer Education
Young Farmer Education
BT Adult Education
Vocational Education
RT Career Ladders
Cooperative Education
Industrial Training
Job Training
Public School Adult Education
Retraining
Trade And Industrial Education
Vocational Rehabilitation

Ad Valorem Tax
USE PROPERTY TAXES

ADVANCED COURSES *Mar. 1980*
SN Courses beyond the introductory or basic level
BT Courses
RT Acceleration
Advanced Placement
Advanced Placement Programs
Advanced Students
Degree Requirements
Elective Courses
Introductory Courses
Majors (Students)

Advanced Credit Examinations
USE EQUIVALENCY TESTS

Advanced Education
USE HIGHER EDUCATION

Advanced Nations
USE DEVELOPED NATIONS

ADVANCED PLACEMENT *Jul. 1966*
CIJE: 58 RIE: 110
SN Permitting students with academic credit or test scores beyond minimum requirements to bypass coursework (note: prior to mar80, this term was not restricted by a scope note -- do not confuse with the more specific "advanced placement programs")
BT Placement
RT Ability Grouping
Academic Achievement
Academically Gifted
Acceleration
Advanced Courses
Advanced Placement Programs
Advanced Students
College Entrance Examinations
Equivalency Tests
Honors Curriculum
Prior Learning
Student Placement

ADVANCED PLACEMENT PROGRAMS *Jul. 1966*
CIJE: 47 RIE: 85
SN Programs adopted in U.S. in 1956 under which high school students can take college entrance examination board (ceeb) tests, receive college credit for acceptable scores, and be placed into sophomore-level college classes (note: prior to mar80, the use of this term was not restricted by a scope note)
BT Programs
RT Academically Gifted
Acceleration
Advanced Courses
Advanced Placement
Advanced Students
Articulation (Education)
College Bound Students
College Entrance Examinations
College School Cooperation
Educational Attainment
Equivalency Tests

ADVANCED PROGRAMS (1966 1980) *Mar. 1980*
CIJE: 38 RIE: 66
SN Invalid descriptor -- used inconsistently in indexing -- see such descriptors as "acceleration," "advanced courses," "advanced placement programs," etc.

Advanced Standing Examinations
USE EQUIVALENCY TESTS

ADVANCED STUDENTS *Jul. 1966*
CIJE: 81 RIE: 87
SN Students studying a particular subject at an advanced level (note: do not confuse with "academically gifted")
BT Students

-Concept represented by two or more USE terms in coordination.

Figure 1
Page from Thesaurus of ERIC Descriptors

Learning Disabilities

The Behavioral Patterns of a Group of Educationally Handicapped Adolescents.
ED 168 255

College Composition and the Invisible Handicap.
ED 168 016

Differential Diagnosis and Prescription-Learning Disabilities.
ED 168 231

Educational Assessment and Instructional Strategies for Adult Exceptional Learners. Final Report.
ED 167 724

Establish and Maintain a Child Service Demonstration Center for Children with Learning Disabilities.
ED 168 969

Identity, Reversibility, and Compensation: An Examination.
ED 168 704

Specific Learning Disabilities. Description of Teacher Inservice Education Materials.
ED 168 991

Teacher and Peer Observations of Mainstreamed Elementary School Pupils: A Comparative Group Study.
ED 168 258

Working with Adult Exceptional Learners. A Handbook of Suggestions for Assessment, Educational Planning and Instructional Strategies.
ED 167 725

Entry from Resources in Education (RIE) Subject Index

ED 167 724 CE 018 884

Bingham, Grace And Others

Educational Assessment and Instructional Strategies for Adult Exceptional Learners. Final Report.

Rutgers, The State Univ., New Brunswick, N.J. Center for Adult Development.

Spons Agency—New Jersey State Dept. of Education Trenton. Bureau of Adult, Continuing, Community Education.

Pub Date—Jul 78

Note—120p.; For a related document see CE 018 885 ; Report prepared on the Special Ecucation Curriculum

Pub Type— Reports - Descriptive (141)

EDRS Price - MF01/PC05 Plus Postage.

Descriptors—*Adult Basic Education, Educational Diagnosis, Educational Innovation, Educational Needs, *Evaluation Methods, *Exceptional Persons, Functional Illiteracy, Inservice Teacher Education, *Learning Disabilities, Master Plans, Models, Needs Assessment, Program Development, Program Evaluation, Research Needs, *Special Education, Statewide Planning, Student Evaluation, *Teaching Methods

Identifiers—New Jersey

A project was conducted to design and implement an educational delivery system that incorporated both assessment and instructional services for adult basic education (ABE) exceptional learners in an urban adult learning center in New Jersey. Two areas were considered of priority in developing the project design: the development of an assessment and remediation model for learning disabilities in functionally illiterate adults and the development of innovative approaches for meeting the needs of adults with learning disabilities. The project consisted of four main components, each addressing specific goals, as follow: educational assessment, educational programming, staff development at the learning center, and project evaluation. Thirty-one students participated in the ABE program which was offered both during the day and evening. Initial assessment tests and posttests were administered to gauge process dysfunctions related to basic skills education. At the end of the project it was concluded that needs exist in the following areas: (1) developing valid and reliable instruments specifically designed to assess adult exceptionality; (2) increasing instructors' competencies in teaching strategies suited to exceptional adults; and (3) developing a national master plan and state plans to meet the educational needs of this population group. (A handbook [CE 018 885] providing assessment, educational planning, and instructional strategies was developed as part of this project.) (ELG)

Sample of abstract from RIE Main Entry section

Learning Disabilities

In the Mainstream: The Labeling Game. *Instructor*, v89 n7 p176 Feb 1980 EJ 219 082

An Adult Educator Views Learning Disabilities. *Adult Literacy and Basic Education*, v3 n2 p85-92 Sum 1979 EJ 219 219

Understanding Children with Learning Disabilities. *Child Welfare*, v59 n1 p2-14 Jan 1980 EJ 219 916

"I'm Not Dumb, Am I?" How to Help Children with Learning Disabilities. *Childhood Education*, v56 n3 p156-60 Jan 1980 EJ 220 013

Entry from Current Index to Journals in Education (CIJE) Subject Index

EJ 219 219 CE 509 206

An Adult Educator Views Learning Disabilities.

Travis, George Y. *Adult Literacy and Basic Education;* v3 n2 p85-92 Sum 1979 (Reprint: UMI)

Descriptors: *Adult Basic Education; *Adult Learning; Diagnostic Tests; *Learning Disabilities; Reading Diagnosis; Reading Tests

A survey of the field of learning disabilities is presented and applied to adults. A review of diagnostic tests reveals concentrated knowledge about learning disabled children and adolescents, and a scarcity of knowledge on adult populations. Pertinent areas for research are proposed for learning disability specialists and adult educators. (Author/SK)

Sample of annotation from CIJE Main Entry section

Figure 2
Sample Entries from RIE and CIJE

for you. The searcher may also help you develop your search strategy, that is, determine what descriptors you should use to retrieve the information you want. You can also get help with developing search strategies from the ERIC Clearinghouses listed below. When you have a computer search done, the full abstracts or annotations can be printed online, which will be available immediately; or offline, which is then mailed and usually arrives in about a week. (Online printing is more expensive than offline since it requires computer time.)

Obtaining ERIC Documents

Most materials announced in RIE can be obtained from the ERIC Document Reproduction Service (EDRS) in either microfiche or paper copy. Order information is included in the back of each copy of RIE, but be sure and check the latest issue to verify price information. Order from ERIC Document Reproduction Service (EDRS), P.O. Box 190, Arlington, Virginia 22210; (703) 841-1212. Some documents may also be available from the original source. This type of availability is generally cited in the abstract information in RIE.

Conclusion

ERIC is not the answer to all of your research needs, but it can be a valuable tool. The more familiar you become with it, the easier it will be to use. The following clearinghouses will be happy to help you with specific requests regarding adults and their areas.

ERIC Clearinghouse on Adult, Career and Vocational Education
The National Center for Research in Vocational Education
Ohio State University
1960 Kenny Road
Columbus, OH 43210
(800) 848-4815

ERIC Clearinghouse on Counseling and Personnel Services
The University of Michigan
2108 School of Education
Ann Arbor, MI 48109
(313) 764-9492

ERIC Clearinghouse on Higher Education
George Washington University
One Dupont Circle, N.W., Suite 630
Washington, D.C. 20036
(202) 296-2597

ERIC Clearinghouse on Junior Colleges
University of California
96 Powell Library Building
405 Hilgard Avenue
Los Angeles, CA 90024
(213) 825-3931

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Thesaurus of ERIC Descriptors. Phoenix, AZ: Oryx Press, 1980.

Wexler, H. "All You Have To Do Is Ask." American Education, June, 1981, pp. 22-27.

The Gatekeepers: A Multivariate Study of Accepted and Rejected A.E.R.C. Abstracts (1978-80)

Ingrid Pipke
University of British Columbia*

Adult education is a field of practice which has given rise to an emerging discipline concerned with the creation of its own body of knowledge. The field and discipline exist in a reciprocal relationship where information is formally and informally diffused both ways. The extent to which information and knowledge is communicated determines the growth and development of each. Informal diffusion occurs primarily through interpersonal channels; formal communication involves use of vehicles such as journals, conferences, and information retrieval systems. "Print" is the most important of the formal methods for diffusing information. Adult education literature commonly appears in books, journals, periodicals, and pamphlets. Conferences and conventions also disseminate knowledge. Their popularity is evidenced by the lavish numbers of participants and money spent on these events. Like other fields and disciplines, adult education is experiencing an "information explosion". Practitioners, scholars, and students are inundated with books, journals, conference publications, and ephemera. But does quantity ensure quality? Are there any controls which distinguish the meritorious from the medicore? Are there screens to ensure that scientifically sound research is disseminated while nonsense is inhibited? These questions have led researchers to study information dissemination networks and quality control systems. Thus, the "gatekeeping" of editors and journal referees has evoked scholarly interest. Researchers in the social sciences have examined variables associated with the acceptance of manuscripts (e.g., Chase, 1970; Gottfredson, 1978), the review process (e.g., Rodman & Mancini, 1977), and interjudge agreement (e.g., Scott, 1974). Although adult educators have not studied manuscript acceptance and suchlike, there is a discernible meta-research tradition which provides the foundation for the present investigation.

Meta-research in Adult Education

Adult education has given rise to several types of meta-research. Sork (1980) reviewed more than 100 examples in adult education and identified six types. Type VI, "Frameworks or Paradigms for Understanding and Improving Research", encompasses studies of the research process and publishing behaviour of researchers. Only five considered publication and dissemination processes. Most concerned Adult Education (USA). Dickinson and Rusnell (1971) conducted a content analysis; Long and Agyekum (1974) focused on the kind, content, and authorship of articles; Boshier and Pickard (1979) analyzed citation patterns; and Lee (1979) studied the contribution of graduate students to the journal. Research related to the acceptance of manuscripts for this or other adult education journals is yet to be conducted. There has also been no study of the Adult Education Research Conference, a vehicle for the dissemination of research findings. The present study is part of this meta-research tradition. The purpose was to study variables associated with the acceptance of abstracts (and thus papers) submitted for "publication" at the Adult Education Research Conference. Specifically, the study (i) examined the characteristics of abstracts submitted for A.E.R.C.'s held in 1978, 1979, and 1980; and (ii) identified variables associated with the acceptance/rejection of abstracts submitted to the A.E.R.C. in those three years.

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* For those unable to attend the conference, tables are available from 3205 West 30th Avenue, Vancouver, B.C. Canada, V6L 1Z5.

Literature Review

The paucity of literature in adult education concerning information dissemination and variables associated with the acceptance of manuscripts led to an examination of studies in related disciplines. These focused on editorial gatekeeping, publication lagtime, interjudge agreement, article quality and citations, and criteria for acceptance. The literature indicated that variables influencing acceptance could be classified into those "external" or "internal" to the manuscript. External variables are embodied in the editor, reviewer, and contributor (e.g., academic and institutional affiliation or membership in professional organizations) or the reviewing process (e.g., anonymity vs non-anonymity, sponsored submissions). Internal variables are those embodied in the manuscript, and usually related to writing and compositional processes and the content of the article (e.g., its theoretical/conceptual basis, its methodological strengths and weaknesses, its originality, and applicability to the field). The extent to which external variables operate depends upon whether the adjudication process is blind (e.g., author's name is known or unknown). Although external variables possibly have an effect on A.E.R.C. abstract acceptance, they could not be studied because judges are not supposed to have direct knowledge of authors and, "external" information is not collected prior to, during, or after the A.E.R.C. Thus, as A.E.R.C. abstracts are judged blind, internal characteristics were presumed to influence acceptance.

INSTRUMENT DEVELOPMENT AND METHODOLOGY

A 41-item instrument was developed to assess the characteristics of A.E.R.C. abstracts. As abstracts were judged blind, the study focused on variables internal to the manuscript. Where possible, variables were anchored in social science or adult education theory. The variables concerned the content of the research, the research processes employed, and the composition of the abstract. The instrument consisted of the 39 variables shown in Table 1. All content variables were coded dichotomously. Thus, if an abstract concerned the foundations of adult education it was coded 2 (yes), if not, it was coded 1 (no) on this variable. With the exception of no. of direct citations, authors cited, state of the research, type of analysis, and "novelty", each process variable was coded on a four-point scale. Thus, if instrumentation was "not identified", it was coded 1; if "barely identified" it was coded 2; if "partially identified" it was coded 3; and if "explicitly identified" the code was 4. On variables such as the number of citations and words in the abstract or title, the actual count was entered.

Reliability

The instrument and coding system had to be reliable and valid so a series of pilot studies were carried out. Two groups of expert judges attested to the content validity of the instrument. The first consisted of two professors and two doctoral students of adult education; the second was the 1981 A.E.R.C. Steering Committee. Interjudge and stability-across-time reliabilities were measured (see Table 1). The interjudge reliability process showed the extent to which five judges agreed among themselves while a researcher-judges procedure showed the extent to which the researcher agreed with the other judges. Based on the coding of nine abstracts, a repeated measures design analysis of variance showed that the judges made consistent coding decisions on 37 of the 39 variables. The anchor points in scales used to quantify variables were sufficiently clear for judges to make responses which resembled those of their colleagues. Considering that 39 calculations were involved, it is possible that the significant F-values for the two unreliable interjudge ratings resulted from Type I errors. This, coupled with the 37 insignificant F-ratios suggested that the judges made consistent ratings. More importantly, the researcher's coding decisions were consistent with those of the judges.

Stability-across-time was established as follows. Five weeks after coding was completed, a random sample of 97 abstracts were recoded while an additional 20 were recoded a third time. Table 1 shows that, of 117 "recode" correlations, 115 were significant at the .05 level (two-tailed test). The remaining two, agency (r=.41, Time 1 x Time 3) and deductive (r=.42, Time 1 x Time 3) attained statistical significance at the .07 level for a two-tailed test, or the .05 level for a one-tailed test. It was concluded that across time, the coding decisions remained stable.

This instrument was used to code 329 (1978 n=77; 1979 n=126; 1980 n=126) accepted and rejected abstracts on 39 variables. Abstracts "published" in conference programmes or proceedings were considered accepted; the remaining were classified as rejected. Each abstract was coded directly onto a coding schedule (the instrument); information pertaining to abstract number, acceptance, year the abstract was presented, and number of words in the title was noted on the schedule after the abstracts had been coded on the other variables. The 329 abstracts were randomly selected, read, and coded during a five-week period. Approximatly 15-20 abstracts were processed daily. The statistical analyses were completed in two steps. The first involved an analysis of differences between the means of accepted and rejected abstracts on each of the internal variables for each year. In the second, discriminant function analyses were employed to obtain combinations of variables which would distinguish between accepted and rejected abstracts.

RESULTS

Bivariate Analyses

Variable means for abstracts accepted and rejected during each of the years are shown in Table 2. In 1978 there were nine significant ($p<.05$) t-values. Thus, accepted abstracts were less inclined to concern agencies but more likely to be methodological, novel, have clearly specified instrumentation, implications for research and the field, to be written in an active voice and have a "logical flow", than were rejected studies. In 1979, three content and three process variables had significant t-values. Thus accepted abstracts were less likely to concern agencies but focused on programme planning and methodological research. Accepted abstracts had a more clearly defined inductive theoretical development, were less anchored in the literature, and more likely to present a novel approach than were rejected abstracts. For 1980, accepted abstracts were more likely to focus on research related to adult characteristics, learning, and foundations than were rejected studies. Accepted studies were more inclined to report data collection procedures, instrumentation, and the sample/population than were rejected studies. They were also more inclined to use a higher-order data analysis and inductive theory than were rejected abstracts. But accepted abstracts used significantly more dysfunctional jargon than did rejected studies.

Different variables significantly distinguished between accepted and rejected abstracts in each of the three years. Only five variables significantly differentiated between accepted and rejected abstracts for more than one year. Two were content variables--methodological (1978, 1979) and agency (1978, 1979). Inductive (1979, 1980), novelty of research (1978, 1979), and instrumentation (1978, 1980) were process variables. Fourteen variables significantly differentiated between accepted and rejected abstracts in only one year. None of the 39 variables differentiated between accepted and rejected abstracts in all years of the study--1978, 1979, and 1980. The inconsistent effects of the variables suggested either that the characteristics of abstracts submitted in different years varied greatly or judges regarded the variables with varying degrees of importance. The first possibility was tested by comparing the variable means of all abstracts (accepted and rejected) submitted in each of the three years (Table 2). A one-way analysis of variance produced only two significant F-values for cumulative literature (F=4.51,

$p<.05$) and flow of the argument ($F=3.79$, $p<.02$). It is possible, indeed probable that these two significant F's resulted from Type I errors. The lack of significant differences among the mean scores strongly suggested that abstracts submitted in each of the three years were essentially the same.

Multivariate Analyses

These preliminary analyses suggested that variables associated with acceptance did not have a consistent relationship during 1978-80. Moreover, matrices showing variable inter-correlations suggested that few variables had independent "effects" on acceptance. There were many significant inter-correlations in the matrix generated for each year. Thus it was decided to perform a discriminant function analysis for each year. These equations would reveal "joint" and "separate" variable effects. Thus, variables which significantly distinguished between accepted and rejected abstracts were entered into equations for 1978, 1979, and 1980. Table 3 lists variables in order of entry into the equations, the initial F-value of each variable before entry, and the resultant discriminant function coefficients.

1978. Of the nine variables which significantly differentiated between accepted and rejected abstracts, six emerged in the discriminant function equation. As indicated by the discriminant function coefficient, voice (.53) was the most powerful variable when working with the other five. The strong negative coefficient (-.44) for agency indicates that A.E.R.C. judges reacted unfavourably toward studies concerned with agencies. However, judges responded positively toward abstracts which focused on methodological research (.40). Abstracts which presented a logical argument (.38), clearly described implications for the field of practice (.38), or which identified research instrumentation (.35) were also favoured by the 1978 judges. As indicated by the canonical correlation (.61), the configuration of variables accounted for approximately 61 percent of the variance in acceptance in 1978. The discriminant function analysis correctly classified 81.8 percent of abstracts submitted using the "internal" variables entered into the equation.

1979. Table 2 indicated that six variables significantly differentiated between accepted and rejected abstracts. Five of these entered the discriminant function equation for 1979 (Table 3). Of these, cumulative literature had the most powerful separate effect (-.54); judges were inclined to reject rather than accept abstracts which were well anchored in the literature. Agency also had a negative effect (-.38) indicating that judges were also inclined to reject rather than accept these abstracts. Accepted abstracts were those which focused on methodological research (.50) or aspects of programme planning (.48), and employed inductive theory (.36). These five variables accounted for 42 percent of the variance. Based on this variable configuration, the discriminant function equation correctly classified 71.4 percent of the abstracts.

1980. Of the nine variables with significant t-values in Table 2, only five were retained in the discriminant function equation (see Table 3). Jargon (-.60) had the most powerful effect on acceptance. Accepted abstracts used more dysfunctional jargon than rejected work. The variable with the second most powerful coefficient was foundations (.58); accepted abstracts were more inclined to focus on issues related to foundations of adult education. The other three variables, characteristics/adult learning (.35), type of analysis (.38), and data collection (.33) were also positively associated with acceptance. As indicated by the canonical correlation (.51), these five variables accounted for 51 percent of the variance in acceptance. Based on this variable configuration, the discriminant function equation correctly classified 78.6 percent of the 1980 abstracts into "accept " and "reject" groups.

Of the original 39 variables, 14 entered into at least one of the discriminant function equations. Only methodological and agency appeared in more than one equation. The remaining twelve variables: inductive, cumulative literature, type of analysis, data collection, instrumentation, implications for the field, programme planning, foundations, characteristics/adult learning, jargon, voice, and flow of the argument entered only one discriminant function equation. Of these variables, six focused on research processes, five concerned abstract content, and three were related to composition.

CONCLUSIONS, DISCUSSION, IMPLICATIONS

According to the Oxford Dictionary (Sykes, 1976) an abstract is "a summary". There is a limit to what can be packed into an abstract that is supposed to be 250 words long. A.E.R.C. judges are gatekeepers who influence knowledge dissemination in adult education. During 1978-80, as in earlier years, they were wholly dependent upon abstract content; thus, authors are under an obligation to include certain minimal information in their abstracts. It is the presence of information concerning theory, instrumentation, data collection, analysis, results and conclusions, that ostensibly influences the acceptance of scholarly work. The previously reported data analyses gave rise to several conclusions concerning variables associated with A.E.R.C. abstract acceptance.

The most important conclusions stem from the fact approximately 77 percent of all abstracts were correctly classified into the accept and reject groups. The blind A.E.R.C. reviewing process has led to a situation where abstracts are supposedly selected on the basis of internal characteristics. However, the present study demonstrated that different variables had different effects in various years. Judges largely attended to variables related to abstract content, research processes, and composition. But the relative influence of these variables varied by year. Judges appear to "weight" variables differently. Two variables, methodological and agency, appeared in two discriminant function equations (1978, 1979); the remaining twelve "significant" variables appeared in only one equation. No variable appears in all three equations. Furthermore, the relative contribution of each variable to the equation varied as well. For example, in 1978, "voice" made the most powerful contribution to abstract acceptance (.53), but it had no influence in 1979 or 1980. For one year, A.E.R.C. judges regarded voice favourably, yet in the following year, two of the same plus two new judges did not react to its presence. This finding raises questions concerning the validity of the A.E.R.C. judging process. It appears that authors are in the hands of judges whose "weightings" change from year to year. One explanation for different variable effects may stem from the possible influence of external variables in the judging process. The first selection procedure often fails to yield enough papers to fill the A.E.R.C. programme. It would be reasonable to expect judges to recognize some of the work of colleagues even though abstracts did not contain names or other identifying marks. Was it possible that when faced with a need to promote rejects to fill out a programme, judges employed external variables? This possibility is partially enhanced by the fact the office of one judge is used as a collection point for A.E.R.C. (incoming abstracts); this judge is in a position to recognize colleagues' work.

The results and discussion suggest a need to modify some A.E.R.C. procedures. First, it would help authors and judges if the recommended abstract length was increased. Both accepted and rejected abstracts were longer than the suggested 250 word length. Authors reporting well-designed and valid studies would benefit from an increased word allowance; it would allow them to more fully describe the research problem, methodology, and results, However, for authors summarizing questionable research a longer abstract would allow flaws to emerge. Judges would more easily

differentiate between acceptable and inadequate research if abstracts were longer. However authors and judges would only benefit from longer abstracts if both knew what to include. Perhaps the A.E.R.C. should sponsor a session or publish guidelines on how to write a good abstract. A third suggestion involves the abstract selection process which, in this study, was the subject of only casual inquiry. During the selection meeting, abstracts are discussed and then judges must reach a decision concerning their acceptance. The present informal system of verbally-pooled decisions may not be satisfactory. Perhaps judges could use a rating scale and provide written judgements to each other? Another possible modification relates to the election of judges. At present, nominations are called for prior to and during the A.E.R.C. There is no "campaigning" and little to identify the competencies of people seeking a position on the Steering Committee. Although there is little time for campaigning at A.E.R.C., candidates could follow the example set in other scientific groups and provide a brief resume of qualifications that equip them to function as a judge.

The A.E.R.C. is an instrument for the dissemination of knowledge to North American and other adult educators. Authors should be heartened by the fact most abstracts are accepted on the basis of internal variables. But despite the system of overlapping judges (who serve two years each) variables strongly associated with acceptance in 1978 were not necessarily influential in 1979 or 1980. This is a provocative finding which might evoke discussions and decisions concerning the A.E.R.C. adjudication process. In summary, this study concerned variables associated with the acceptance of A.E.R.C. abstracts for 1978, 1979, and 1980. It did not measure the quality of abstracts or papers. However, by measuring the characteristics of abstracts in a reliable way it has generated baseline data that will provide opportunities for future researchers to make interesting and theoretically relevant comparisons in years to come.

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I. Ongoing Adult Education Research: An Analysis of the Proposals Submitted to the Adult Education Interest Area of the Postsecondary Education Division of the American Educational Research Association for Presentation at the AERA Annual Meeting, 1982.

Authors: Penelope L. Richardson and Bertie Dawes Wood

Institutional Affiliation: University of Southern California

II. The purpose of the paper is to inform the adult education research community, especially those individuals just entering the field, of current activity. Specifically, papers submitted to AERA will be analyzed for strengths and weaknesses and some advice to next year's proposal writers will be offered.

At the AERA meeting of 1981, a new Division of Postsecondary Education was formed, composed of the following ten "interest areas:" academic programs; community/junior colleges; developmental/instructional development; governance, finance, and law; college students; comparative, historical and philosophical dimensions of postsecondary education; and adult, continuing, and lifelong education. In the adult, continuing and lifelong education interest area, 37 proposals were submitted in response to the "call for papers" for the 1982 meeting. Each contained an abstract and a 3-4 page description, usually organized to include description of objectives, theoretical framework, methods, data sources, results, and implications. Proposals were reviewed blind by three readers selected on the basis of past scholarship in the field or because they volunteered (thus proposal reviewers included experts and novices). They were rated in terms of topic (professional significance, interest, contribution); content (theoretical/conceptual base, literature continuity, conclusions/interpretation); and communication (organization, clarity).

For the total Postsecondary Education division, 77 papers were accepted to be presented in 15 paper/critique sessions and 107 presentations were accepted for 26 symposia sessions. Some 18 papers were accepted for single roundtables and 29 for group roundtable sessions. Of all these, 15 were papers or symposia submitted to the adult, continuing, and lifelong education interest group.

This paper will analyze the proposals submitted, according to various dimensions, and will make recommendations about improvement of proposals for next year's conference. It will also comment on certain logistical, conceptual, and political factors bearing on this group of proposals. It will conclude with some recommendations about how AERA's new interest area in adult, continuing and lifelong education may most productively work with other organizations interested in improving the quality and dissemination of adult education research.

Penelope Richardson
1601 Grenadier Drive
San Pedro, CA 90732

Bertie Wood
10 Academy Road
Palos Verdes Peninsula, CA 90274

III. Methodology

The 37 presentation proposals were subjected to five catagorizations as follows:

1. Five types of institutions from which the authors came--university (23), college (3), private company (7), federal agency (3), or school district (1);
2. Fourteen topic areas (14 of the proposals were listed under two catagories, rather than only one)--curriculum (1), community/junior college (0), lifelong learning (8), remediation (2), equity (4), evaluation (4), inservice and instructional strategies (12), governance, finance and law (0), college students (5), comparative, historical and philosophical dimensions (1), administration (8), learning and instruction (1), measurement and research (1), counseling (2), or social context (2);
3. Eight methodological approaches--case study (6), discussion of a topic without apparent methodological treatment (8), symposia (8, one of which was concerned with a rigorously carried-out 14-case study), interview (8), statistical report (1), survey (1), questionnaire (3), experiment (2);
4. Stated number of subjects in the research sample--none (14), one through twenty (10), twenty-one through forty (2), seventy-five (1), ninety-six (1), 101 through 200 (2), 201 through 300 (4), 301 through 400 (1), 536 (1), 1,325 (1);
5. Preliminary rating--definitely accept (6), accept if possible (10), conditionally accept (12), reject (8), rating unavailable (1).

The following crosstabulations were made:

1. Institution by rating;
2. Topic by rating;
3. Method by rating;
4. Number by rating;
5. Institution by method;
6. Topic by method;
7. Institution by topic.

IV. Findings

All of the proposals originally rated "definitely accept" or "accept if possible" were subsequently accepted for presentation except one. Of these 16 proposals, 11 came from universities, one from a college, two from private companies, and two from federal agencies.

With four exceptions, the accepted papers cover the whole range of topics listed above. The four unrepresented areas are the following: first, community/junior colleges and second, governance, finance and law (in both areas no papers were submitted to the adult, continuing, lifelong section); third, college students and fourth, counseling (in these areas papers were submitted but not accepted for presentation). One paper that was accepted dealt with curriculum, one with remediation, one with comparative adult education, and one with learning. Two were accepted that dealt with lifelong learning, two with equity, and two with social context. Three were accepted dealing with evaluation, four with administration, and five with inservice training and instructional techniques.

The eight proposals based on discussion were not accepted, nor were the statistical report or the survey. One of the two experimental studies was accepted, as were one of the three questionnaire-based, three of the six case studies, four of the seven symposia, and seven of the eight interview-based proposals.

Proposals were accepted in every range of sample number from one to 300. The only proposals accepted without a stated number in the sample population were symposia.

There was a wide spread of methods used by the authors from various types of institutions. The only school district proposal was a discussion. Individuals from federal agencies proposed a case study, a symposium, and an interview-based study. Private companies proposed two case studies, two discussions, two symposia and a statistical report. The three proposals from colleges consisted of a case study, a discussion, and a symposia. University proposals were based on every method except the statistical report, with seven interview-based studies, four discussions, four symposia, three questionnaire-based studies, two experiments, two case studies, and a survey.

The only topics for which there were more than one or two proposed studies using the same methods were inservice and instructional techniques (4 symposia), administration (3 interview-based studies), and lifelong learning (3 symposia). The remaining symposia were both concerned with equity.

The school district proposal was concerned with inservice and instructional techniques. Federal agencies submitted two proposals on administration, one on evaluation, one on equity, and one on lifelong learning. From private companies came three proposals concerned with inservice and instructional techniques, two with administration, two with college students, one with lifelong learning and one with curriculum. The college-generated proposals were concerned with administration, equity, and lifelong learning. Proposals from universities fell into every catagory, with eight in inservice and instructional strategies and five in lifelong learning.

V. Discussion--Conclusions

This review of the 37 proposals submitted for presentation in the adult, continuing and lifelong learning interest area of the postsecondary education division of the AERA seems to suggest the following:

1. The practice-oriented field of adult education has as its most active research concern the inservice training of practitioners and improvement in their instructional techniques.
2. Unrepresented in contemporary research are two areas crucial to the continuance of adult education as it exists in America today--the relationship between adult education and the community colleges and adult education governance, finance and law.
3. Proposals for a discussion that are not based on an appropriate methodological treatment are not acceptable to the AERA.

Discussion--Implications

The main flaw in the proposals rejected was that they did not meet the criteria for disciplined inquiry. Disciplined inquiry is conducted and reported in such a way that the argument can be painstakingly examined. The argument does not depend on eloquence of writer or surface plausibility. It anticipates certain traditional questions. The investigator introduces control at each step of information collection and reasoning to avoid sources of error. The investigator discusses the margin for error in conclusions. Thus, the report of disciplined inquiry displays raw material entering the argument and the logical processes by which they were compressed and rearranged to make the conclusion credible. The data, arguments, and reasoning are capable of withstanding careful scrutiny by another member of the scientific community. Those who would like to become useful and respected members of the adult education research community must be willing to attend to the details of disciplined inquiry (Shulman, 1981).

The quality of research represented by the 37 proposals reviewed here, as well as the quality of the review itself, was undoubtedly negatively influenced by three logistical factors. Foremost was the problem of letting adult education researchers know that the new subdivision existed in time for them to submit papers (April-August, 1981). Second was the problem of informing new submitters of the AERA standards, format, and acceptable options. Third was the problem of quickly soliciting qualified reviewers for the papers submitted.

Certain conceptual factors have delayed the development of a research tradition in adult education--lack of common definitions, the practical orientation of the field, a lack of research dollars, and paucity of coherent research programs.

There are certain political factors that should be faced in order to maximize the possible benefits of the new adult education interest area of AERA. To discuss honestly together the uninspiring past record of AERA's attention to adult education issues, to recognize and dispel a feeling of defensiveness in AERC as the new interest area is organized, and to promote crossfertilization between research in adult education and other educational areas will open a whole new range of possibilities for mutual support. Such support can then be developed through cooperation and common insistence on maintaining high standards of quality in methodology and presentation of research.

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Adults in Higher Education: From Theory to Practice

Catherine A. Marienau, Ph.D.
University of Minnesota

Problem, Purpose and Conceptual Framework of the Reported Study

Recent research and theory suggest that both adult development and planned change have powerful implications for increasing higher education institutions' responsiveness to adult learners. Little is known, however, about applying those theories to bring about improved practices for adults.

The purpose of the study was to determine how adult development and planned change theories and strategies were used by local teams of faculty and administrators to influence academic improvement projects in their institutional settings. Three overarching questions guided the inquiry: (1) How useful are adult development and planned change theories for practitioners in higher education settings?; (2) What interpretations and applications emerge from practitioners' intentional use of theory?; and (3) What relationships can be formed between theory and practice in these two major areas?

The conceptual frameworks used in the study were based in adult development and planned change theories and their implications for effective higher education responses. Adult development refers to the orderly and sequential changes in characteristics and attitudes that adults experience over time, involving a process of qualitative change (Knox, 1977; Weathersby & Tarule, 1980). Planned change refers to deliberate efforts to institute innovations--for the purposes of the study--in colleges and universities.

The conceptual framework for adult development assumes that (a) tremendous variation exists among adult learners in situational, dispositional, and intellectual concerns, and (b) adults continue to develop throughout the lifespan. Three areas of research and theory address individual differences in adult development: (a) life cycle periods, (b) ego development, and (c) learning styles. These three dimensions particularly have implications for educational responsiveness to adult learners.

Life cycle research and theory concerns adults' responses to age and changing social expectations. At various periods in their lives, individuals encounter marker events, undergo transitions, resolve developmental tasks, and in the process, transform experiences into opportunities for development (Chickering & Havighurst, 1981; Erikson, 1968; Levinson, 1978; Neugarten, 1968). Awareness of an adult learner's place in the life cycle helps educators to predict what the individual will learn and when he or she will learn it (Aslanian & Brickell, 1980). Whereas life cycle theory emphasizes time-linked periods, ego development research and theory emphasizes qualitatively different frames of reference individuals have for constructing meaning in their lives (Kohlberg, 1973; Loevinger, 1976; Perry, 1981). The successive world views of ego development stages tend to shape adult learners' experience of their education (Weathersby & Tarule, 1980). Learning style research and theory addresses how individuals are likely to approach learning in specific situations and influence the effectiveness of a given learning experience (Claxton & Ralston, 1978; Kolb, 1981). These three areas

Catherine A. Marienau, Director
University Without Walls Program
201 Wesbrook Hall, 77 Pleasant St. S.E.
Minneapolis, Minnesota 55455

"provide foundation stones, both conceptually and practically, for the wider range of issues (facing) institutions...as they try to provide better higher education for adult learners" (IAI Sourcebook, 1979).

The study used Lindquist's (1978) Adaptive Development Model for planned change because it was based on a synthesis of prior planned change theories and strategies. Lindquist (1978, p. 223) calls this synthesis adaptive development because "planned change is a local development, ...one which is stimulated and guided by the adaptation of external innovations rather than the invention of new ones." The model posits five factors--Force, Linkage, Openness, Ownership, and Rewards (FLOOR)--as essential ingredients in a successful change process (Lindquist, 1980, 1978).

Methodology

Approach. A case study approach was used to describe and explain how adult development and planned change theories and strategies were understood, interpreted, and applied by practitioners in their local institutional settings. What was sought were "slice-of-life episodes" that represented as closely as possible how people feel, what they know and how they know it, and how they structure their concerns, perceptions and understandings (Caulley, 1977; Patton, 1980).

Population. The three institutions selected for case study were among thirteen colleges and universities that had been introduced to a common conceptual framework in adult development and planned change through participation in a federally-funded intervention project. The Higher Learning for Diverse Adults Project (HiLDA) was conducted at Memphis State University during 1979-81. It provided professional development workshops and consultation to help teams of faculty, staff, and administrators apply adult development and planned change theories in designing and implementing new or altered practices for adult students.

Dimensional (Arnold, 1970) and maximum variation sampling techniques (Patton, 1980) were used to select the cases. Maximum variation was sought concerning institutional type and size, project goals, prior involvement in serving adults, and recent involvement with innovation and change. Consistency was sought on three dimensions: (a) exposure to and participation in the HiLDA Project, (b) stability of the teams over the two-year period, and (c) demonstration of central administrative support for the teams' efforts at the outset of the study.

Three HiLDA institutions met these criteria and were willing to participate in the case study research: (a) a community college, Eastglade Community College, whose team instituted a study circle model--"a formal system for informal learning;" (b) a private liberal arts college, Southern Pioneer College, whose team introduced learning style differences into teaching and advising practices and made modifications in curriculum policy; and (c) a public university, Riverside State University, whose team engaged in action research to identify the diversity and needs of their student population.

Primary data sources were members of the three improvement teams since they were the loci of planning and activity regarding academic change efforts associated with the HiLDA Project. Other key individuals included: (a) the teams' project resource persons; (b) administrative personnel; and (c) faculty or staff closely associated with the local change effort.

Data collection. Information was obtained from sixty-nine participants through intensive guided interviews (Lofland, 1971; Patton, 1980). Interviews of 1 1/2 - 3 hours duration were conducted on site during the period February - April, 1981. Data were hand-recorded using the key-phrase method; most interviews also were tape-recorded with the participant's consent. The interview guide was organized around general topics that included: (a) a chronological

account of the participant's involvement in the local HiLDA project; (b) perspectives on applications of planned change theory; (c) perspectives on applications of adult development theory; and (d) views on their institution's responsiveness to adult learners and on outcomes of their HiLDA project. In addition, information was gleaned from materials on file at the three sites and available in the HiLDA Project files.

Data Analysis. A four-step process (Lofland, 1971; Patton, 1980) was used for the within-site analysis and for the cross-site analysis. The steps for the within-site analysis involved: (a) incorporating preliminary data analysis into the data collection; (b) formulating classification schemes based upon recurring regularities in the data; (c) establishing sets of categories and discerning the meanings and relationships between and among them; and (d) formulating inferences concerning relationships and consequences posed in the research problem.

With regard to the cross-site analysis, data within categories were reviewed and analyzed for the three cases as a whole. Emergent themes were identified and relationships were established to identify the collective range of interpretations and applications of adult development and planned change theories. These themes were integrated with those from the conceptual framework to identify educational responses and change approaches that were grounded in theory and practice.

Authenticity and confidentiality. Steps taken to ensure validity of the data included: (a) using an expert panel to review the construct validity of the conceptual frameworks and the criteria for case selection; (b) field-testing the interview guide to determine its content validity; (c) using two or more participants to corroborate the file data and the interview data; and (d) submitting case narrative drafts to team members for approval. While the institutions' association with the HiLDA Project were made known, their privacy was protected as follows: (a) pseudonyms were used for individuals and institutions; (b) only the researcher had access to raw interview data; and (c) participants could request deletion of identifying information in the case narrative.

Findings

Outcomes. The Eastglade Community College (ECC) team successfully adapted and used the Swedish study circle model to suit their adult clientele and to integrate this learning strategy for academic credit into the formal curriculum. Fifteen study circles were initiated during the project, and a system was established to offer study circles as part of the regular curriculum. The Southern Pioneer College (SPC) team's major goal was to improve curriculum, teaching, and advising practices for all students, including adults. They used data from Kolb's Learning Style Inventory successfully to support proposed competency-based graduation requirements, to modify existing teaching and advising practices, and to instruct faculty about the notion of learning style differences among students. The Riverside State University (RSU) team had intended to gather data on the diversity of students in order to make procedural and policy recommendations in the student services area. Formulation of the plan, however, occupied the team's activities for seventeen months of the two-year project. While they collected data on freshman students, their lack of agreement on what student population to study (e.g., adults) and for what purpose thwarted progress toward any project goals. Unlike the ECC and SPC teams, the RSU team did not successfully implement their project.

Adult development. The ECC and SPC teams found that translating adult development theory into practice was made easier by having available guidelines (e.g., life cycle models) and instruments (e.g., learning style inventories) that address how individuals progress through the lifespan and differ in their

styles of learning. They found ego development difficult to translate into practice because (a) they lacked specific models that could be tested in their own settings, and (b) they found the language somewhat vague, thus making it difficult to talk about with others in meaningful terms.

Both ECC and SPC members reported direct application of adult development theory in curriculum and in teaching. From analysis of the data, it became evident that principles of adult development also were applied--indirectly--to professional development for team members and for other faculty and staff. Members of the three teams also felt that theory could be applied in the areas of academic advising and in student orientation programs; they indicated interest in pursuing those areas in the future.

While none of the teams attempted to apply any theory in its totality during the two-year period, the ECC and SPC teams saw utility in aspects of life cycle, learning style, and ego development theories. Having made no effort to apply theory, only one-third (three members) of the RSU team indicated seeing utility in adult development theory for their project at the end of the two-year period.

Planned change. The ECC and SPC cases illustrate that successful outcomes can result from proper attention to the FLOOR factors of the Adaptive Development model. Conversely, an unsuccessful outcome resulting from inattention to the FLOOR factors was evident in the RSU case. All three teams felt that each of the five FLOOR factors--Force, Linkage, Openness, Ownership, and Rewards--was an important part of a successful change equation.

The Force factor concerns the active powers and resources behind the improvement effort. Team members found that skillful, collaborative leadership was critical for a successful effort, particularly when faculty and administrators cooperated as active participants. When a collaborative force was not present from the administration, it was critical that strong leadership emanate within and from the team. RSU members felt their project probably would not have failed had the administration provided adequate leadership "to set the process in motion" and had they exercised effective leadership within the group to sustain the effort.

The Linkage factor concerns the types and strengths of connections established with the power and knowledge centers in the institution that facilitate the problem-solving process. Critical linkages for the ECC and SPC teams involved (a) having access to the administration and to key faculty groups and leaders, (b) working through formal and informal communication channels and committee structures, and (c) involving the faculty in planning committees and task forces. The RSU team felt that their failure to establish adequate links in the institution severely restricted their productivity.

The Openness factor concerns the movement of people toward change, the resourcess with which they interact, and the behaviors they exhibit. ECC and SPC team members indicated that openness needed to be expressed in five important ways: (a) recognition of the need to change by the team and by other influential members in the institution, (b) knowledge and skill within the team to foster others' willingness to change, (c) skillful use of resources within and outside of the institution, (d) genuine concern for and attention to creating a climate of trust and cooperation within the team and with other institutional members, and (e) use of data upon which to base judgments and actions. The RSU team felt that lack of openness within their group and the institution seriously limited their functioning and productivity.

The Ownership factor concerns the spread of the change effort without the loss of the initial force. Achieving ownership was seen by the ECC and SPC teams to involve (a) forming a faculty-administrative team, (b) providing forums

for faculty involvement, (c) allowing adequate time for information and persuasion to take effect, and (d) delegating responsibility for implementation of the change to other informed and influential individuals. The RSU team felt that their failure to define a common problem and own it was a primary deterrent to the project.

The Rewards factor concerns the proportion of rewards equivalent to the skill and effort put into the change effort. Both the ECC and SPC teams felt that their productive efforts and successful outcomes generated adequate intrinsic rewards. The SPC team felt, however, that they could have accomplished even more had extrinsic rewards (e.g., released time) been available. While the RSU team did not expect compensations for their work, they felt that rewards should have (but did not) "come from knowing (they) did a good job."

Conclusions and Implications

Based on findings of the study, it was concluded that practitioners needed institutional and group support in understanding theory and experience in interpreting theory in a variety of contexts. Practitioners tended to need experts to help them see the relevance of the theories to their particular settings. It was found that application of theory did not follow easily from understanding; successful application was made possible when instruments or models were available for adaptation in local settings. Not surprisingly, practitioners rated high on utility those theories (e.g., learning style and life cycle) which they applied successfully.

In spite of difficulties experienced in applying theory, team members saw relationships between theory and practice. They believed gaps could be bridged through (a) professional development activities, (b) intentional use and tests of theoretical frameworks in local settings, and (c) active and skillful participation of faculty and administration in local change efforts.

Team members identified principles from adult development theory which they perceived were linked to educational environments responsive to adult learners. Those principles recognize: (a) individual differences, (b) human needs across the lifespan, (c) prior experience, (d) self-directed and experiential learning, (e) importance of choice, (f) teaching as facilitation, and (g) learners as active participants in the learning process.

The teams' perspectives on the utility of the FLOOR factors add a dimension of reality to the Adaptive Development model. Their experiences suggest that skillful Force and genuine Openness are prerequisite factors that set the stage for constructing effective Linkages and realizing broad Ownership. Rewards result from the adequate presence of the first four factors. While the interplay among the factors is maintained, this reexamination posits partnerships between given factors and refines a sequence of the Adaptive Development model.

A major implication that emerges from the study, augmented by the literature, concerns using adult development and planned change frameworks to construct developmentally educative environments for adult learners. In such environments, education would be viewed as a continuous process of reconstructing experience. In order for that reconstruction process to be educative, individual learners must be able to interact with their environment in ways that enable them to create significant meaning out of their educational and life experiences. A developmentally educative environment might be described by the following characteristics: (a) provides or identifies resources to help individuals assemble and change their life structures; (b) provides challenging opportunities and supportive structures for individuals to pursue developmental tasks that promote personal, social, intellectual, and professional competence; and (c) attends to the physiological, affective, and cognitive dimensions of the individual learner.

The notion of a developmentally educative environment has implications for practitioners, change agents, and theorists. In addition, the need has emerged for a new breed of professional whose expertise is in helping practitioners translate theory into practice. Efforts to build developmentally educative environments, guided and supported by adult development and planned change theories and strategies, can move rhetoric into practice and can make a learning society a reality for all.

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DEVELOPMENT OF A RATIONALE AND METHOD FOR FORMULATING A PERSONAL PHILOSOPHY OF ADULT EDUCATION

Lorraine M. Zinn*
University of Colorado Health Sciences Center

This study (still in progress) has a dual purpose: to provide a rationale for identifying and clarifying one's personal philosophy of adult education and to develop a self-directed method and an instrument that can be used by the adult educator to formulate a personal philosophy.

The Problem

All adults live and act on the basis of some life philosophy, some set of beliefs about life. This life philosophy is often unrecognized and rarely expressed, although it may be understood implicitly. It is rarely static or inflexible; beliefs may change over time to accommodate new needs and experiences. Goals may not be verbalized, direction is often unclear, and actions may be inconsistent with beliefs and values. Yet, the life philosophy does provide a framework through which human beings can interpret their world and act within it.

When the adult educator engages in the practice of education, certain beliefs about life in general are applied to the practice. These beliefs constitute the basis for a philosophy of education. As with the life philosophy, the philosophy of education may be unrecognized, internally inconsistent, and only partially formulated. However, on the basis of these beliefs, the adult educator determines educational objectives, sets priorities, selects instructional methods and materials, and measures the learner's success.

Examination and clarification of one's personal philosophy of adult education could be beneficial in a number of ways (to be discussed further in the Rationale section of this paper). However, there has heretofore not been a clearly defined method or instrument which the adult educator could use for this purpose. Although a number of observers have identified philosophies for the field of adult education (Zinn, 1977; Merriam, 1977; Elias & Merriam, 1980), only one (Apps, 1973) has proposed some guidelines for developing an individual "working philosophy."

In a field in which the concept of self-directed learning prevails, it is appropriate that a method for identifying or formulating one's personal educational philosophy would also be self-directed. The method suggested by Apps is not of this type; it uses the format of a class, workshop or seminar in which the personal philosophy development process is facilitated by a group leader or instructor. Thus, the need still remains for some self-directed method through which the adult education can clarify, identify and/or formulate a personal philosophy of adult education.

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* Research and Training Center in Cardiac Rehabilitation (RT-10), Training Unit, 800 Clermont Street, Suite 410, Denver, Colorado 80220

Rationale

Adult educators are constantly faced with answering the questions, "What should I do?," and "How should I do it?" Answers to these questions can be sought in rational thought; but other strategies are often followed, such as acting on the basis of habit or trying the newest technique. One undesirable consequence of such eclectic solutions is that they may lead to significant inconsistencies in what is being done. Pittenger and Gooding (Phillips, 1981, p.122) make clear that for the learning situation, if ends and means are incompatible, "then any technique predicated on these two conflicting facets is very likely to produce undesirable or unexpected results...usually expressed in terms of ineffective or incidental learning behavior."

Phillips suggests that an examination of one's beliefs will yield a set of "framework assumptions" that provide the basis for making choices as educators. "It is our basic beliefs," he asserts, "--our values or purposes and the factual order we accept--which are the determining criteria." He advises against seeking justification for our basic beliefs; it is sufficient, and indeed necessary, to identify them. "The justification for our bedrock beliefs is that we believe them. It should be noted that we cannot believe what we wish to believe; we believe what we do believe. We can only act on the basis of what we believe to be right, in ways we think will be effective. This is not to say, of course, that we cannot change our beliefs in the face of evidence which we find convincing. What we take to be evidence, however, what we accept as proof, is dependent on our framework assumptions." (p.101)

Other observers of the field have suggested the following potential benefits of examining and clarifying one's personal philosophy of adult education: it provides an integrated, consistent basis for making judgments and decisions (Stewart, 1973); helps to separate what is worthwhile from what is trivial (Paterson, 1971; Apps, 1973); enhances critical thinking skills and expands vision (Elias and Merriam); resolves conflict between beliefs and actions and between the adult educator and the sponsoring institution (Apps); clarifies how adult education relates to important problems of individuals and society (Apps); and helps the adult educator to ask better questions and to answer questions better regarding educational programming (Apps).

Methods

An extensive literature search was conducted, initially in 1977 and updated in 1981, to seek support for the need for adult educators to clarify their personal philosophy of adult education and to identify appropriate methods and/or instruments, if such existed, for doing so. Through this search, four methods and one instrument were identified. Each of these was analyzed, and the conclusion was reached that none of them provided the self-directed method or instrument desired by this researcher. There were elements from each, however, that could be used in the development of a new method and instrument.

A prototype of a new instrument was developed, based primarily on the Training Style Inventory published by Brostrom (1979). An extension of the instrument encompasses the general guidelines proposed by Apps and a summary

of five philosophies for the field of adult education discussed by Elias & Merriam. The instrument is designed to be self-administered, self-scored and self-interpreted; the method for its use is described through instructions for its administration, scoring and interpretation of results. If desired, results may be shared with others in a group format.

No validity or reliability testing has yet been conducted on the instrument. Content validity will be established by a panel of 5-6 experts in the field, adult educators who have some background in educational philosophy and educational philosophers who have some knowledge of the field of adult education. Reliability testing will be done with a total of 20-25 adult educators who function in varied roles, primarily teachers and administrators.

The New Method and Instrument

The method proposed by this researcher for identifying and formulating a personal philosophy of adult education involves the following steps: (1) self-administration of the "Inventory for Identifying a Personal Philosophy of Adult Education;" (2) self-scoring of the Inventory, using the instructions provided; (3) self-interpretation of the Inventory, following the instructions provided; (4) formulation of a statement of personal philosophy by rephrasing and reorganizing the 15 responses that were ranked first on the Inventory; and (5) completion of the activities identified as Suggestions for Further Study. These final activities may optionally be done in a group format.

An inventory format was chosen because it is easy for an individual to complete, score and interpret for him/herself. Sentence completion was used on the Inventory so that the responses would yield complete statements that reflect the respondent's personal philosophy of adult education. Rather than being forced to make a single choice from among the options, the respondent is asked to indicate his/her preferences through a process of rank ordering five possible phrases that could complete each sentence.

When responses to the Inventory are scored, the range of scores indicates the degree to which the respondent reflects each of five philosophical orientations through educational decision-making. A synopsis of each of the five adult education philosophies enables the individual adult educator to examine his/her personal philosophy of adult education in a context that identifies basic assumptions and concepts, key words and processes, the primary role of the adult educator, and strengths and possible limitations of approaching adult education with each philosophy. Additionally, the description identifies other individuals who espouse(d) the philosophy, as well as educational programs and practices that reflect it.

Through the Synthesis activity, the respondent is able to construct a personal "working philosophy" by reorganizing and rephrasing the various statements he/she has chosen as reflecting a primary philosophical orientation. Further reflection and study are encouraged and guided through the self-study suggestions.

Conclusions and Implications

This study follows a direction that has been suggested by an increasing number of adult educators and observers of the field, especially during the past five years. It moves beyond the task of identifying the various philosophies that characterize the field of adult education, encouraging individual adult educators to personalize these philosophies and to examine the relationship between their own philosophical orientation and their practice of adult education. Desirable outcomes of such "philosophizing" include an expanded vision of the broad scope of adult education, a better understanding of how the individual adult educator can function within the field, and a stronger basis for educational decision-making that is congruent with the adult educator's personal beliefs and values.

The method and instrument proposed in this study incorporate the strongest elements of previous work done in the field: the comprehensive overview of adult education philosophies provided by Elias and Merriam, the framework and general guidelines proposed by Apps for formulating a statement of interrelated beliefs, and a format based on Brostrom's Training Style Inventory that yields a very usable instrument that reflects the connection between educational decisions and actions and a philosophical orientation. This self-directed method and instrument provides an alternative to the method currently used by Apps to assist adult educators in formulating and clarifying a personal philosophy of adult education. It expands the options open the individual adult educator, increasing the likelihood that there will be a method and/or instrument that fairly closely matches individual learning styles.

This does not, of course, preclude other possible formats, methods, and/or instruments that might accomplish the same purpose. For example, greater use might be made of values clarification techniques to help the adult educator examine, clarify, and modify his/her personal philosophy. Other combinations of individual and group activity might better suit certain adult educators as they go through the process of examining their personal beliefs and values. Further research might be done on the relationship between espoused philosophies (what people say they believe) and the beliefs and values actually demonstrated in actions. This might yield yet another alternate format or method based on observation of the adult educator's actions and a comparision of the results of that observation with what the adult educator says that he/she believes.

The relationship between an individual's beliefs and his or her practice, occupation or profession is certainly not limited to the field of adult education. The theories that provide the underpinnings for this study can easily be extended to other areas of education, including elementary and secondary education, health education, and continuing education for a variety of professions. Additionally, there are broader connections to be made. For example, one of the strongest foundations for the "Theory Z management" currently being practiced by certain Japanese and American businesses is the development of a company philosophy which underlies all of the company's operating principles and policies. A logical extension of this management approach would be to encourage and enable individual workers to examine the relationship between their own beliefs and values and the company's philosophy.

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